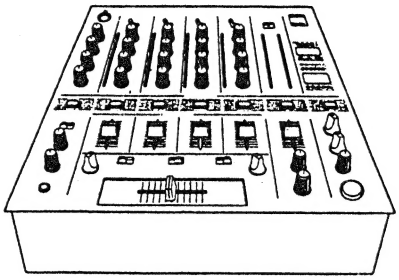
Service Manual

PIONEER®
The Art of Entertainment



ORDER NO.
RRV1405

DJ MIXER

DJM-500

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	DJM-500		
KUC	○	AC120V	————
RELM	○	AC110–120V/220–240V	With the voltage selector

CONTENTS

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

T-DFY NOV. 1995

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

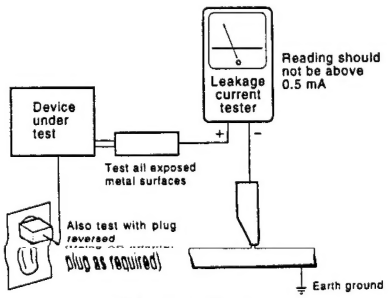
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage , etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

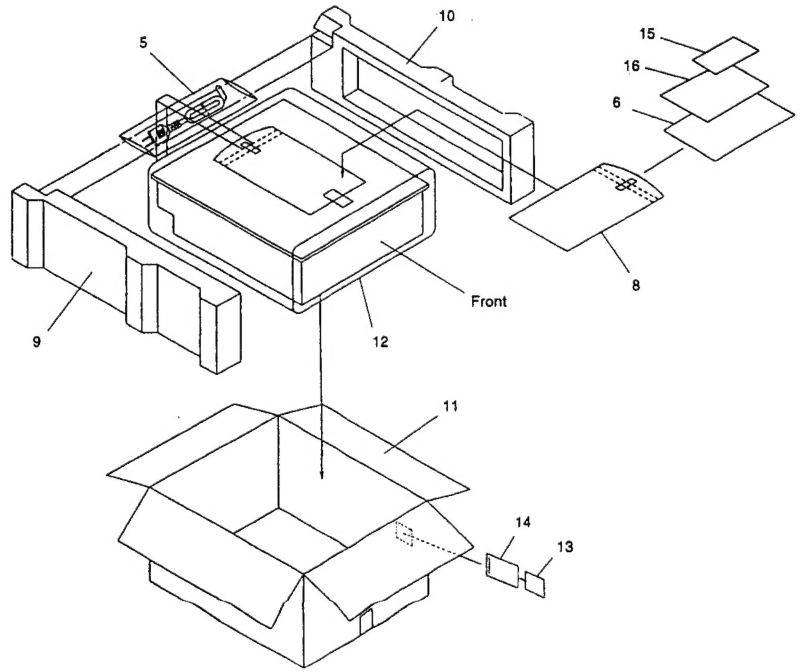
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES :
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

2.1 PACKING

Mark	No.	Description	Parts No.
	1	.....	
	2	.....	
	3	.....	
	4	.....	
	5	AC POWER CORD (KUC type)	DDG1071
	5	AC POWER CORD (RELM type)	ADG1127
	6	OPERATING INSTRUCTIONS (English) (KUC type)	DRB1192
	6	OPERATING INSTRUCTIONS (English/French/German/Italian/Dutch/Swedish /Spanish/Chinese) (RELM type)	DRB1191
	7	.....	
	8	POLYETHYLENE BAG (0.03X230X340)	Z21-038
	9	PAD L	DHA1350
	10	PAD R	DHA1354
	11	PACKING CASE (KUC type)	DHG1683
	11	PACKING CASE (RELM type)	DHG1682
	12	SHEET	RHX1006
NSP	13	FOLLOW UP CARD (KUC type only)	DRY1032
			DRY1032
NSP	14	VINYL BAG (KUC type only)	DHL1011
NSP	15	CAUTION CARD (220V) (RELM type only)	ARR7003
	16	INSTRUCTION MANUAL	DRM1187

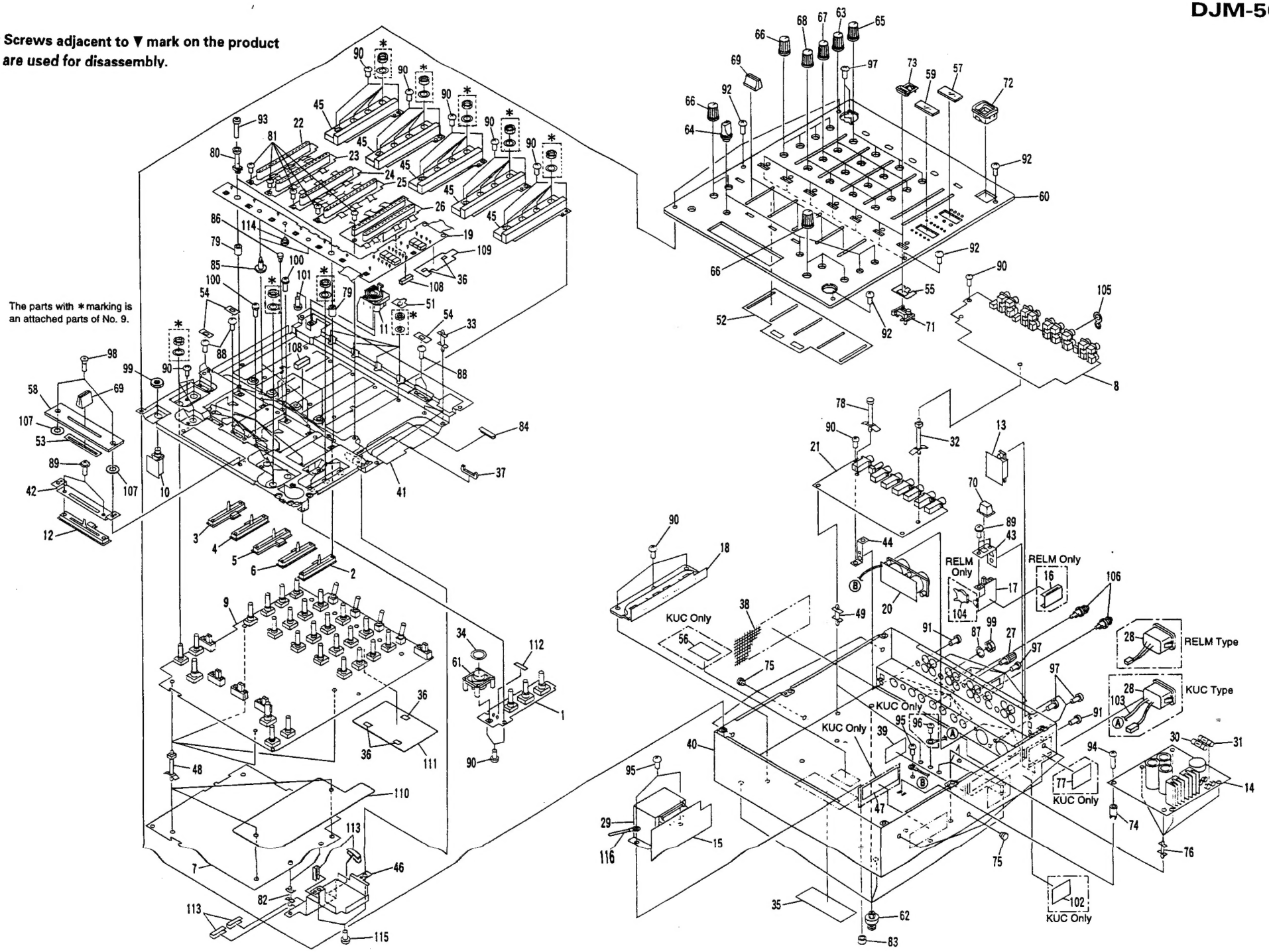


2.2 EXTERIOR

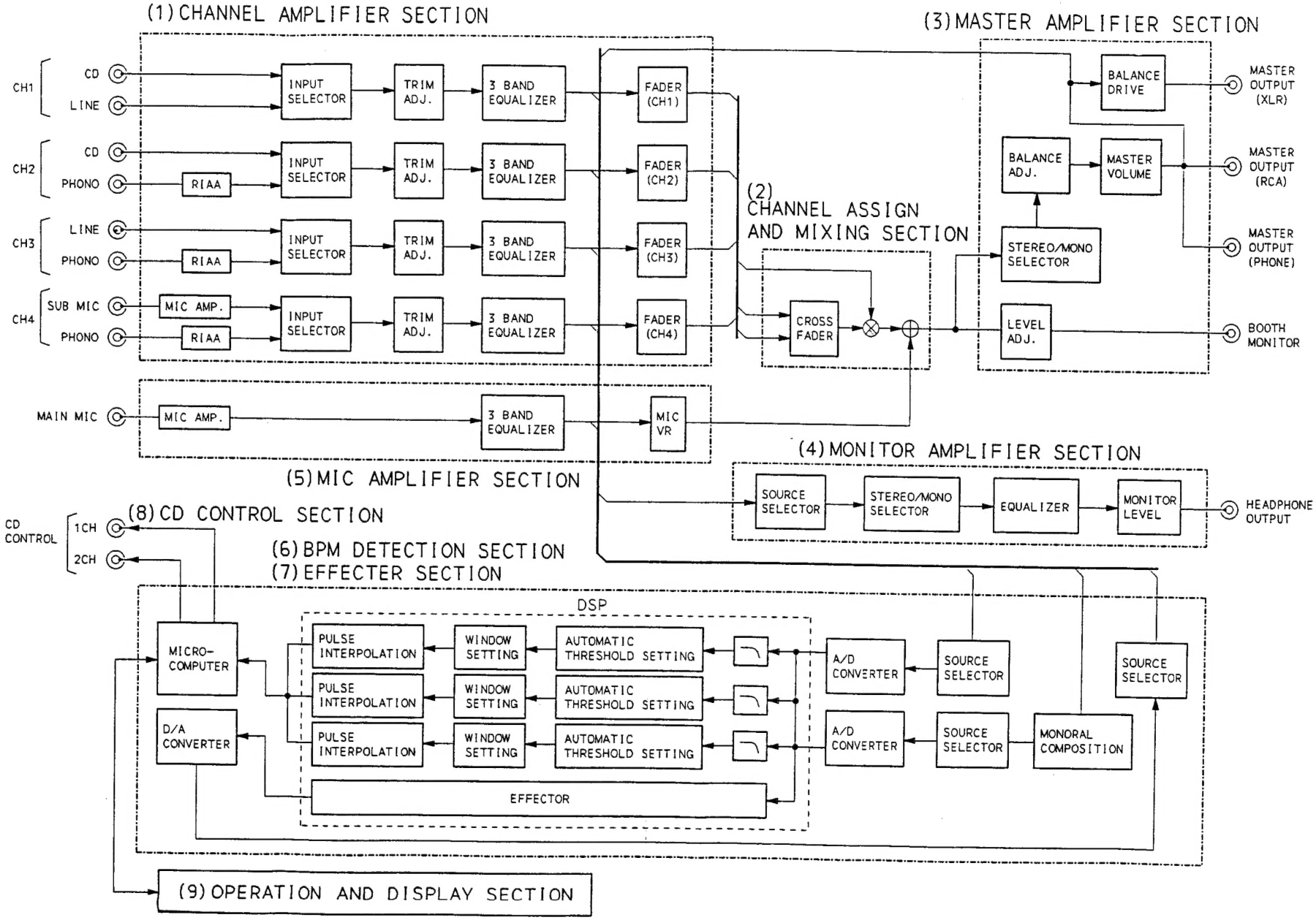
Mark	No.	Description	Parts No.
NSP	1	EFFECT VR ASSY	DWG1472
NSP	2	FADER VR ASSY (MAIN)	DWG1474
NSP	3	FADER VR ASSY (CH1)	DWG1475
NSP	4	FADER VR ASSY (CH2)	DWG1476
NSP	5	FADER VR ASSY (CH2)	DWG1477
NSP	6	FADER VR ASSY (CH2)	DWG1478
	7	DSP ASSY	DWZ1055
	8	TERMINAL ASSY	DWZ1056
	9	VR ASSY	DWG1471
NSP	10	PHONE JACK ASSY	DWZ1057
NSP	11	MIC JACK ASSY	DWZ1066
NSP	12	C. F. ASSY	DWG1473
NSP	13	VOLTAGE SELECT ASSY	DWR1241
	14	POWER SUP. ASSY	DWR1242
NSP	15	POWER TRANS ASSY	DWR1243
	16	SW COVER (RELM type only)	DEC1984
NSP	17	POWER SW ASSY	DWR1245
NSP	18	REG. ASSY	DWR1246
	19	7SEG. ASSY	DWZ1058
NSP	20	BAL. OUT ASSY	DWZ1059
	21	PHONE ASSY	DWZ1060
NSP	22	CH1 METER ASSY	DWZ1061
NSP	23	CH2 METER ASSY	DWZ1062
NSP	24	CH3 METER ASSY	DWZ1063
NSP	25	CH4 METER ASSY	DWZ1064
	26	MASTER METER ASSY	DWZ1065
	27	TERMINAL SCREW	AKE-031
⚠	28	AC INLET ASSY (3P) (KUC type)	DKP3238
⚠	28	AC INLET ASSY (3P) (RELM type)	DKP3237
⚠	29	POWER TRANSFORMER	DTT1130
⚠	30	FUSE (T800mA, FU2)	REK-099
⚠	31	FUSE (1.25A, FU1)	VEK1016
NSP	32	PCB SPACER (30)	DEC1389
	33	BOARD SPACER	DEC1955
NSP	34	PCB MOULD	AMR1525
	35	LABEL	DRW1739
	36	FL SPACER	AEB7047
	37	EDGE GUARD	DEC1944
	38	NET A	DED1108
NSP	39	CAUTION LABEL (G)	VRW-548
NSP	40	CHASSIS (KUC type)	DNA1198
NSP	40	CHASSIS (RELM type)	DNA1196
NSP	41	PANEL STAY	DND1192
	42	SLIDER PLATE	DNF1518
	43	SW PLATE	DNF1519
	44	EARTH PLATE	DNF1520
	45	SHIELD PLATE	DNH2117
	46	CABLE COVER	DNH2139
	47	65 LABEL (KUC type only)	ORW1069
NSP	48	PCB SUPPORT	REC1248
NSP	49	PCB SUPPORT	VEC1508
	50	SNAP PLATE	VNE1102
	51	LEVER SW PACKING	DED1098
	52	FADER PACKING A	DED1099
	53	FADER PACKING B	DED1100
	54	SLIDE SW PACKING	DED1106
	55	TACT SW PACKING	DED1114
	56	CAUTION LABEL (KUC type only)	DRW1728
	57	DISPLAY PANEL A	DAH1793
	58	SLIDER PANEL	DAH1794
	59	DISPLAY PANEL B	DAH1796
	60	CONTROL PANEL	DNB1066
	61	LOOP KNOB	DNK2943
	62	FOOT ASSY	REC-434
	63	ROTARY VR KNOB G	DAA1133
	64	ROTARY SW KNOB	DAA1134
	65	ROTARY VR KNOB DG	DAA1135
	66	ROTARY VR KNOB B	DAA1136
	67	ROTARY VR KNOB GY	DAA1139
	68	ROTARY VR KNOB GG	DAA1140
	69	FADER KNOB	DAC1846
	70	POWER KNOB	DAC1847
	71	TACT KNOB	DAC1848
	72	POWER KNOB GUIDE	DNK3207
	73	TACT KNOB GUIDE	DNK3208
	74	EFFECT SW PACKING	DED1110
NSP	75	CLIP	AEC-036
	76	PC SUPPORT	DEC1773
	77	SHEET (KUC type only)	DEC1939
NSP	78	SPACER	DEC1649
	79	COLLAR	DEC1953
	80	BUSH	DEC1957
	81	SCREW	DBA1044
NSP	82	PC SUPPORT	VEC1235
	83	GUARD	DEC1964
	84	GUARD TAPE	DED1113
NSP	85	PCB HOLDER	PNW1706
NSP	86	PC SUPPORT	VEC1749
	87	WASHER	DBE1010
	88	SCREW	AMZ26P040FMC
	89	SCREW	AMZ30P040FMC
	90	SCREW	BBZ30P060FMC
	91	SCREW	BBZ30P060FZK
	92	SCREW	BBZ30P100FZK
	93	SCREW	BBZ30P140FMC
	94	SCREW	BBZ30P180FMC
	95	SCREW	BBZ40P060FMC
	96	SCREW	BMZ40P060FMC
	97	SCREW	BPZ30P080FZK
	98	SCREW	CBZ30P080FZK
	99	NUT	NKX2FUC
	100	SCREW	PMH26P040FMC
	101	SCREW	PPZ30P050FMC
NSP	102	CAUTION LABEL (KUC type only)	AAX-361
	103	EARTH LEAD (KUC type only)	DDX1157
	104	CAPACITOR COVER (RELM type only)	REC-150
	105	GROUND PLATE	ANK1074
	106	SHORT PIN PLUG	AKM-050
	107	SPACER (WASHER)	DEC1982
	108	SPACER	DEB1327
	109	PVC SHEET A	DEC1979
	110	PVC SHEET B	DEC1980
	111	PVC SHEET C	DEC1981
	112	PCB TAPE	DED1115
	113	ACETATE TAPE(G)	REH1010
NSP	114	PC SUPPORT	VEC1749
	115	SCREW	BBZ30P040FMC
NSP	116	CORD CLAMPER	RNE-513

NOTE : Screws adjacent to ▼ mark on the product *are used for disassembly.*

The parts with * marking is an attached parts of No. 9.



3. BLOCK DIAGRAM



PION-04819 / Druck 2

■ BLOCK DIAGRAM EXPLANATIONS

(1) Channel Amplifier Section

The input signal of each channel is sent to the mixing part. There are four channels, and each channel has input from two systems.
The respective channels are matched to the connected equipment, channel 1 is CD/LINE, channel 2 is CD/PHONO, channel 3 is LINE/PHONO, channel 4 is MIC (sub)/PHONO, and selection is made with the input selector switch.
Each channel is equipped with a 3-band equalizer permitting independent control of trim for control of the input signal level and fader volume for high, medium, and low range.

(2) Channel Assign and Mixing Section

The signal from the channel amplifier is selected with the C.F. assign switch and is sent to both ends of the cross-fader.
The C.F./direct mixing switch is used to select mixing only with the source allotted to the cross-fader or mixing only with the cross-fader.

(3) Master Amplifier Section

The signal after mixing is processed.
The input signal passes balance adjustment and main volume adjustment and then is sent to the next stage.

(4) Monitor Amplifier Section

This is the source selection circuit for confirmation of the signal of each channel with headphones etc.
The input signal can be selected from channels 1 to 4, mike, effector, and master. For channels 1 to 4, the signal before each channel fader can be monitored, so that signal confirmation is possible in case of trim adjustment and master mixing. Also, and adjustable equalizer is installed for correspondence to cases where beat is difficult to hear with headphones.

(5) MIC Amplifier Section

There are two mike input systems, the phone type input (submike) at the rear panel and the Canon type input (main mike) at the control panel, and the main mike input is equipped with an independent equalizer for high, medium, and low range in addition to volume adjustment.

(6) BMP Detection Section

The BMP (Beats Per Minute, a factor indicating the speed of a title as the number of beats per minute) of the signal selected with the monitor select switch are detected, and the BMP value or the beat interval time is displayed.
The synchronization of the input signal by frequencies is detected, the BMP of the most stable signal are selected, and the data are processed by the microcomputer part. The detection modes are "real-time mode" with data display in real time and "average mode" with display of stable information for a certain time, and the microcomputer executes output according to the indication.
The beat timing also can be indicated to the beat monitor of the selected channel.

(7) Effector Section

Diverse effects can be realized with the built-in DSP (Digital Signal Processor).
The DSP operation can be selected with the effector function selection switch from pitch shifter, delay/flanger, pan/reverberation/echo.
The applicable channels are channels 1 to 4, mike, and master. For increased ease of use in combination with an external equalizer a SEND/RETURN terminal which can correspond to each channel is provided, and input level adjustment is possible.

(8) CD Control Section

When a CDJ-50/CDJ-500(G) is connected to channel 1 or 2, the CD player can be started from this unit.
In the same way, when CDJ-500 II is connected, stop (back cue) is possible in addition to CD player start. This is executed using the relay start function of CDJ-50/CDJ-500(G) and CDJ-500 II, and interlocked operation with channel fader and cross-fader also is possible.

(9) Operation and Display Section

The part in regard to display and operation of the built-in fader is executed by a microcomputer. BPM display and its mode switching, control of effect parameters and built-in fader, beat monitor, and level meter display, control, etc. are executed by an 8-bit microcomputer.

4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAMS Type 2A

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ⎓ or ⎓ V :
   The −14dBV (1kHz) signal on the CH1 (LINE) side is shown by the DC voltage (V) at the time of input.
   ⇦ mA or ⎓ mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ⊘ : Adjusting point.
   - ◄ : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH−□ ON THE SCHEMATIC DIAGRAM:**
   - SCH−□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):

EFFECT VR ASSY
S171: CH. SELECTOR (1–2–3–4–MIC)
S174: EFFECT SELECTOR
(AUTO BPM–DELAY–ECHO–AUTO PAN
–FLANGER–REVERB–PITCH–SEND RETURN)

VR ASSY
S1: MASTER STEREO–MONO
S2: MONITOR STEREO–MONO
S281: FADER START (CH1) ON–OFF
S282: ASSIGN A 1 – 2 – 3 – 4
S283: ASSIGN B 1 – 2 – 3 – 4
S284: CROSS FADER ON – OFF
S285: FADER START (CH2) ON–OFF
S401: INPUT SELECTOR (CH1) CD1–LINE1
S402: INPUT SELECTOR (CH2) CD2–PHONO1
S403: INPUT SELECTOR (CH3) LINE3–PHONO2
S404: INPUT SELECTOR (CH4) SUBMIC–PHONO3

7SEG. ASSY
S652: MONITOR SELECTOR EFFECT
S653: MONITOR SELECTOR MASTER
S654: MONITOR SELECTOR CH4
S657: MONITOR SELECTOR MIC
S658: MONITOR SELECTOR CH1
S659: MONITOR SELECTOR CH2
S660: MONITOR SELECTOR CH3
S665: BPM REAL TIME–AVERAGE

VOLTAGE SELECT ASSY
S902: VOLTAGE SELECTOR AC110–120V/220–240V

POWER SW ASSY
S901: POWER SW ON–OFF

NOTE FOR PCB DIAGRAMS:

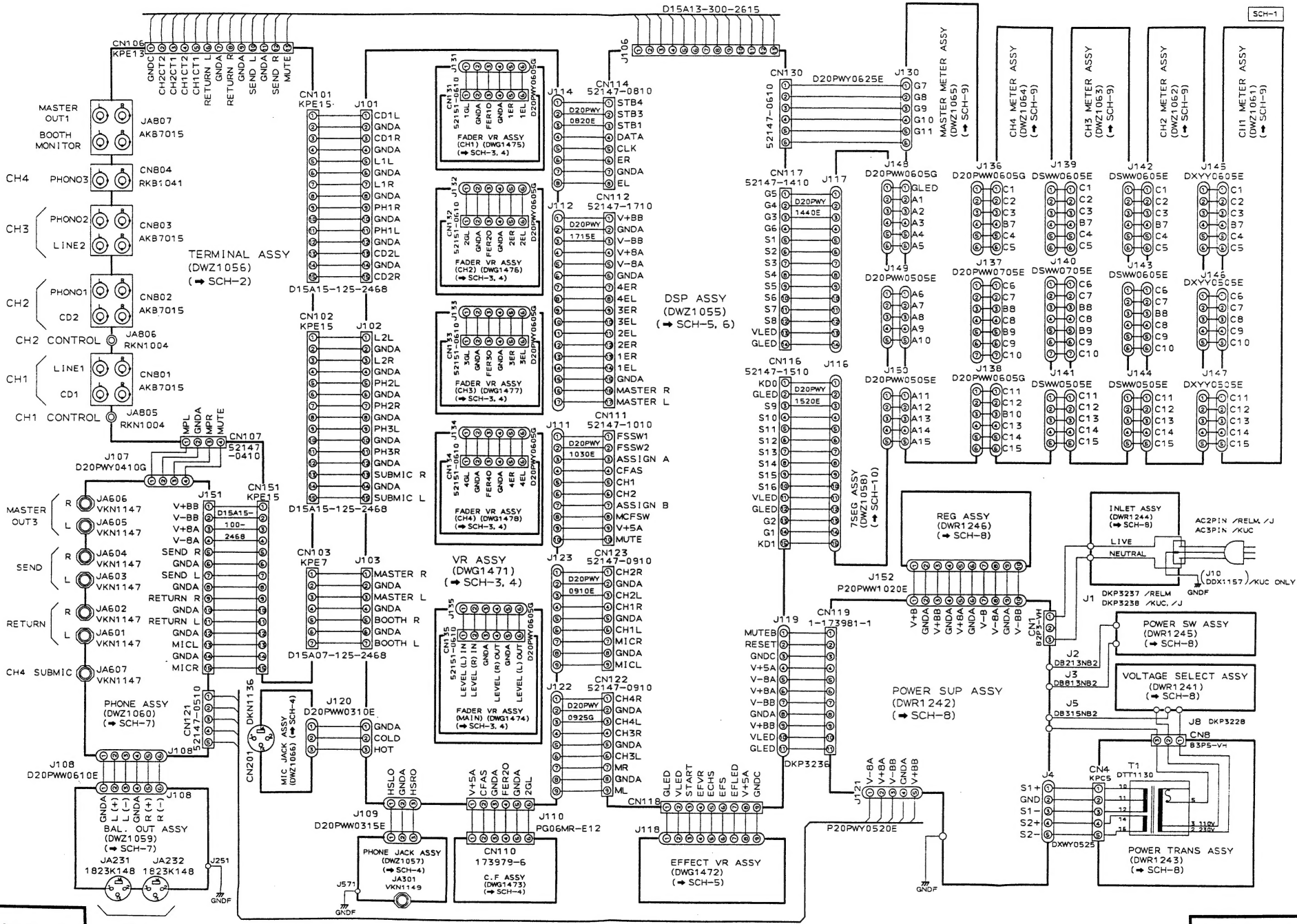
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3- terminal regulator

10. **CONDITION TO BIND OF WAVEFORMS**
    Bind of VR

VR131–VR134: FADER VR (CH1–CH4) ..... MAX
VR401–VR404: TRIM VR (CH1–CH4) ..... MAX
VR405–VR408: EQ HI VR (CH1–CH4) ..... MIDDLE
VR409–VR412: EQ MID VR (CH1–CH4) ..... MIDDLE
VR413–VR416: EQ LOW VR (CH1–CH4) ..... MIDDLE
VR135: CROSS FADER ..... A SIDE
VR2: MASTER BALANCE ..... MIDDLE

Note: All the knob position (settings) for the oscilloscope in the schematic diagrams procedures are for when 10:1 probe is used.

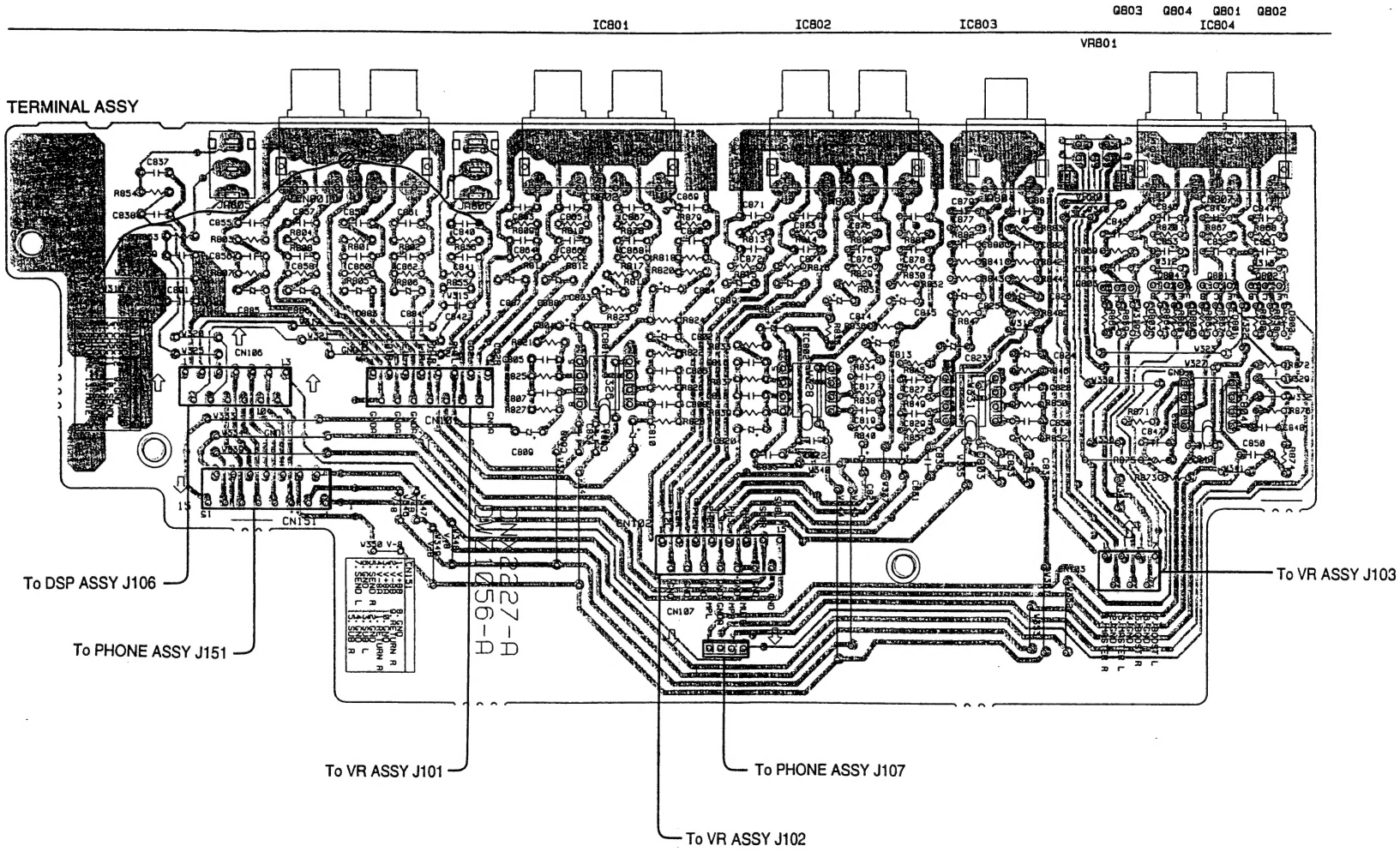

SCH-1
D15A13-300-2615
CN106
KPE13
GNDC
CH2CT2
CH2CT1
CH1CT2
CH1CT1
RETURN L
GNDA
RETURN R
GNDA
SEND L
GNDA
SEND R
MUTE
MASTER OUT1
BOOTH MONITOR
JAB07
AKB7015
CH4
PHONO3
CN804
RKB1041
CH3
PHONO2
LINE2
CN803
AKB7015
TERMINAL ASSY
(DWZ1056)
(➡ SCH-2)
CH2
PHONO1
CD2
CN802
AKB7015
CH2 CONTROL
JA806
RKN1004
CH1
LINE1
CD1
CN801
AKB7015
CH1 CONTROL
JA805
RKN1004
MPL
GNDA
MPR
MUTE
CN107
52147-0410
J107
D20PWY0410G
MASTER OUT3
SEND
RETURN
CH4 SUBMIC
JA606
JA605
JA604
JA603
JA602
JA601
JA607
VKN1147
J151
V+BB
V-BB
V+8A
V-8A
SEND R
SEND L
RETURN R
RETURN L
MICL
MICR
CN151
KPE15
D15A15-100-2468
CN101
KPE15
J101
CD1L
CD1R
L1L
L1R
PH1R
PH1L
CD2L
CD2R
D15A15-125-2468
CN102
KPE15
J102
L2L
L2R
PH2L
PH2R
PH3L
PH3R
SUBMIC R
SUBMIC L
D15A15-125-2468
CN103
KPE7
J103
MASTER R
MASTER L
BOOTH R
BOOTH L
D15A07-125-2468
CN121
52147-0510
PHONE ASSY
(DWZ1060)
(➡ SCH-7)
J108
D20PWW0610E
GNDA
L (+)
L (-)
GNDA
R (+)
R (-)
BAL. OUT ASSY
(DWZ1059)
(➡ SCH-7)
JA231
JA232
1823K148
1823K148
J251
GNDF
MASTER OUT2
CN201
DKN1136
MIC JACK ASSY
(DWZ1066)
(➡ SCH-4)
J120
D20PWW0310E
GNDA
COLD
HOT
J109
D20PWW0315E
HSLO
GNDA
HSRO
PHONE JACK ASSY
(DWZ1057)
(➡ SCH-4)
JA301
VKN1149
J571
GNDF
J110
PG06MR-E12
V+5A
CFAS
GNDA
FER2O
GNDA
2GL
CN110
173979-6
C.F ASSY
(DWG1473)
(➡ SCH-4)
CN131
52151-0610
FADER VR ASSY
(CH1) (DWG1475)
(➡ SCH-3, 4)
CN132
52151-0610
FADER VR ASSY
(CH2) (DWG1476)
(➡ SCH-3, 4)
CN133
52151-0610
FADER VR ASSY
(CH3) (DWG1477)
(➡ SCH-3, 4)
CN134
52151-0610
FADER VR ASSY
(CH4) (DWG1478)
(➡ SCH-3, 4)
VR ASSY
(DWG1471)
(➡ SCH-3, 4)
CN135
52151-0610
FADER VR ASSY
(MAIN) (DWG1474)
(➡ SCH-3, 4)
J106
CN114
52147-0810
J114
D20PWY
0820E
STB4
STB3
STB1
DATA
CLK
ER
GNDA
EL
CN112
52147-1710
J112
D20PWY
1715E
V+BB
GNDA
V-BB
V+8A
V-8A
GNDA
4ER
4EL
3ER
3EL
2EL
2ER
1ER
1EL
GNDA
MASTER R
MASTER L
DSP ASSY
(DWZ1055)
(➡ SCH-5, 6)
CN111
52147-1010
J111
D20PWY
1030E
FSSW1
FSSW2
ASSIGN A
CFAS
CH1
CH2
ASSIGN B
MCFSW
V+5A
MUTE
CN123
52147-0910
J123
D20PWY
0910E
CH2R
GNDA
CH2L
CH1R
GNDA
CH1L
MICR
GNDA
MICL
CN122
52147-0910
J122
D20PWY
0925G
CH4R
GNDA
CH4L
CH3R
GNDA
CH3L
MR
GNDA
ML
CN118
GLED
VLED
START
EFVR
ECHS
EFS
EFLED
V+5A
GNDC
J118
EFFECT VR ASSY
(DWG1472)
(➡ SCH-5)
CN130
52147-0610
D20PWY0625E
J130
G7
G8
G9
G10
G11
MASTER METER ASSY
(DWZ1065)
(➡ SCH-9)
CH4 METER ASSY
(DWZ1064)
(➡ SCH-9)
CH3 METER ASSY
(DWZ1063)
(➡ SCH-9)
CH2 METER ASSY
(DWZ1062)
(➡ SCH-9)
CH1 METER ASSY
(DWZ1061)
(➡ SCH-9)
CN117
52147-1410
J117
D20PWY
1440E
G5
G4
G3
G6
S1
S2
S3
S4
S5
S6
S7
S8
VLED
GLED
J148
D20PWW0605G
GLED
A1
A2
A3
A4
A5
J149
D20PWW0505E
A6
A7
A8
A9
A10
J150
D20PWW0505E
A11
A12
A13
A14
A15
J136
D20PWW0605G
C1
C2
C3
B7
C4
C5
J137
D20PWW0705E
C6
C7
B8
C8
B9
C9
C10
J138
D20PWW0605G
C11
C12
B10
C13
C14
C15
J139
DSWW0605E
J140
DSWW0705E
J141
DSWW0505E
J142
DSWW0605E
J143
DSWW0605E
J144
DSWW0505E
J145
DXYY0605E
J146
DXYY0505E
J147
DXYY0505E
CN116
52147-1510
J116
D20PWY
1520E
KD0
GLED
S9
S10
S11
S12
S13
S14
S15
S16
VLED
GLED
G2
G1
KD1
7SEG ASSY
(DWZ1058)
(➡ SCH-10)
REG ASSY
(DWR1246)
(➡ SCH-8)
J152
P20PWW1020E
V+B
GNDA
V+BB
GNDA
V+8A
GNDA
V-B
V-8A
GNDA
V-BB
INLET ASSY
(DWR1244)
(➡ SCH-8)
LIVE
NEUTRAL
AC2PIN /RELM, /J
AC3PIN /KUC
(J10 DDX1157) /KUC ONLY
GNDF
J1
DKP3237 /RELM
DKP3238 /KUC, /J
CN1
B2P3-VH
POWER SW ASSY
(DWR1245)
(➡ SCH-8)
J2
DB213NB2
J3
DB813NB2
VOLTAGE SELECT ASSY
(DWR1241)
(➡ SCH-8)
J5
DB315NB2
J8 DKP3228
CN8
B3P5-VH
CN119
1-173981-1
J119
MUTEB
RESET
GNDC
V+5A
V-8A
V+8A
V-BB
GNDA
V+BB
VLED
GLED
DKP3236
POWER SUP ASSY
(DWR1242)
(➡ SCH-8)
J121
V-8A
V+8A
V-BB
GNDA
V+BB
P20PWY0520E
GNDF
CN4
KPC5
J4
S1+
GND
S1-
S2+
S2-
DXWY0525
T1
DTT1130
3 110V
2 230V
POWER TRANS ASSY
(DWR1243)
(➡ SCH-8)

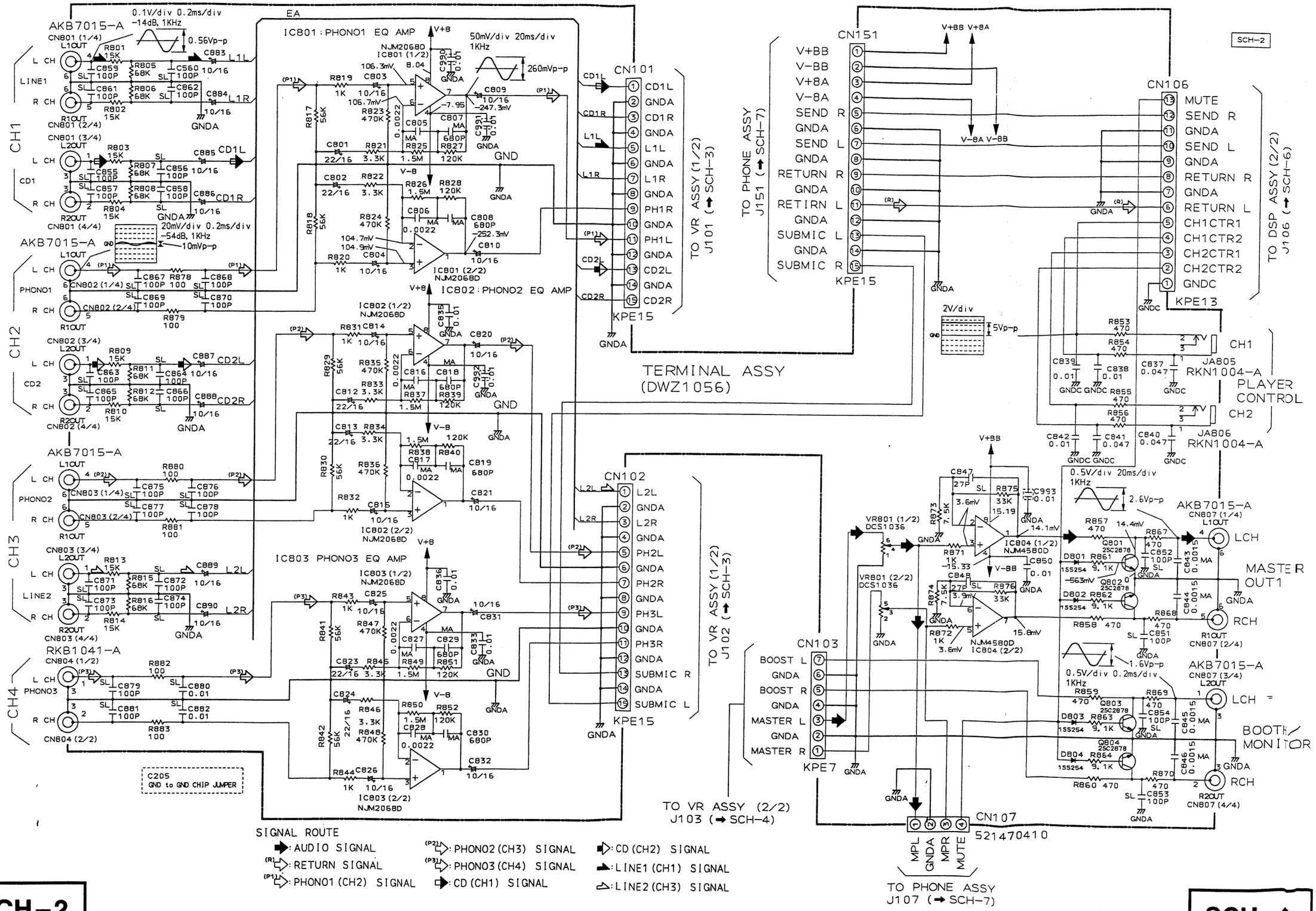
4.2 TERMINAL ASSY

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

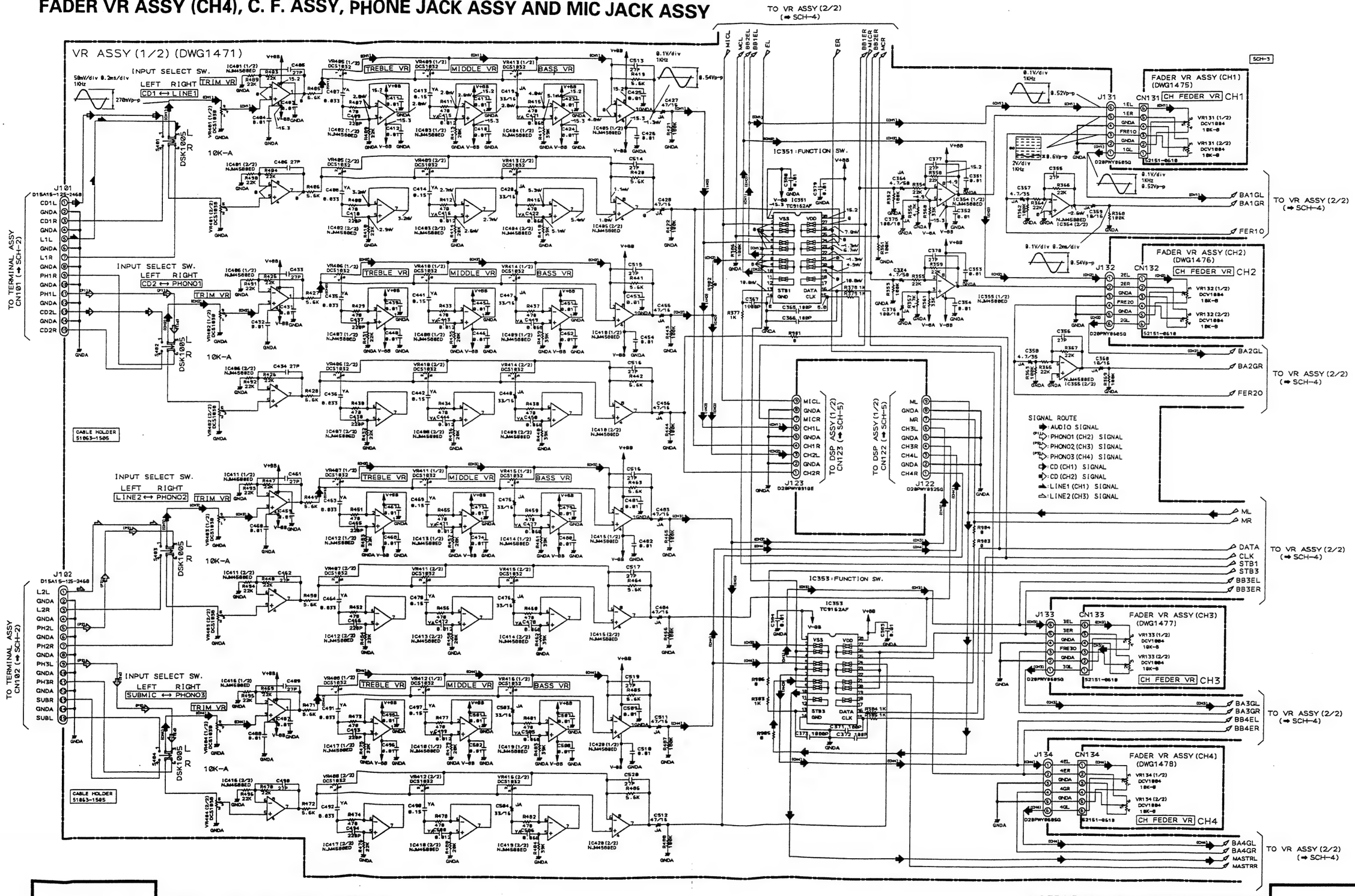
このＰＣＢ図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。

- This diagram is viewed from the mounted parts side.
- この図は部品取付面側から見た図です。




EA
IC801 : PHONO1 EQ AMP
IC802 : PHONO2 EQ AMP
IC803 PHONO3 EQ AMP
AKB7015-A
RKB1041-A
CH1
CH2
CH3
CH4
LINE1
LINE2
CD1
CD2
PHONO1
PHONO2
PHONO3
CN101
CN102
CN103
CN106
CN107
CN151
KPE15
KPE7
KPE13
TERMINAL ASSY (DWZ1056)
TO VR ASSY (1/2) J101 (➡ SCH-3)
TO VR ASSY (2/2) J103 (➡ SCH-4)
TO VR ASSY (1/2) J102 (➡ SCH-3)
TO PHONE ASSY J151 (➡ SCH-7)
TO DSP ASSY (2/2) J106 (➡ SCH-6)
TO PHONE ASSY J107 (➡ SCH-7)
SCH-2
PLAYER CONTROL
MASTER OUT1
BOOTH/MONITOR
C205 GND to GND CHIP JUMPER
SIGNAL ROUTE
AUDIO SIGNAL
RETURN SIGNAL
PHONO1 (CH2) SIGNAL
PHONO2 (CH3) SIGNAL
PHONO3 (CH4) SIGNAL
CD (CH1) SIGNAL
CD (CH2) SIGNAL
LINE1 (CH1) SIGNAL
LINE2 (CH3) SIGNAL

4.3 VR ASSY, FADER VR ASSY (CH1), FADER VR ASSY (CH2), FADER VR ASSY (CH3), FADER VR ASSY (CH4), C. F. ASSY, PHONE JACK ASSY AND MIC JACK ASSY



SCH-3 FADER VR ASSY (CH1), FADER VR ASSY (CH2), FADER VR ASSY (CH3), FADER VR ASSY (CH4), VR ASSY (1/2)

FADER VR ASSY (CH1), FADER VR ASSY (CH2), FADER VR ASSY (CH3), FADER VR ASSY (CH4), VR ASSY (1/2) **SCH-3**

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

このＰＣＢ図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。

PCB－2

To TERMINAL ASSY CN103

To DSP ASSY CN122

To DSP ASSY CN112

IC416 IC417 IC418 IC419 IC420 IC12 IC25 IC6 IC14 IC15 IC13 IC16
IC411 IC412 IC413 IC414 IC415 IC3 IC353 IC1 IC5
IC406 IC407 IC408 IC409 IC410 IC351 IC355 IC6 IC10
IC401 IC402 IC403 IC404 IC405 IC4 IC354 IC201 IC11
IC201 IC202 IC203 IC204 IC18 IC302 IC303 Q306 Q305

VR401-VR408 VR409-VR416 VR2 VR4

VR201 VR203 VR204 VR202 VR301 VR302

VR ASSY

FADER VR ASSY (MASTER)

FADER VR ASSY (CH4)

FADER VR ASSY (CH3)

C. F. ASSY

FADER VR ASSY (CH2)

FADER VR ASSY (CH1)

To DSP ASSY CN111

PHONE JACK ASSY

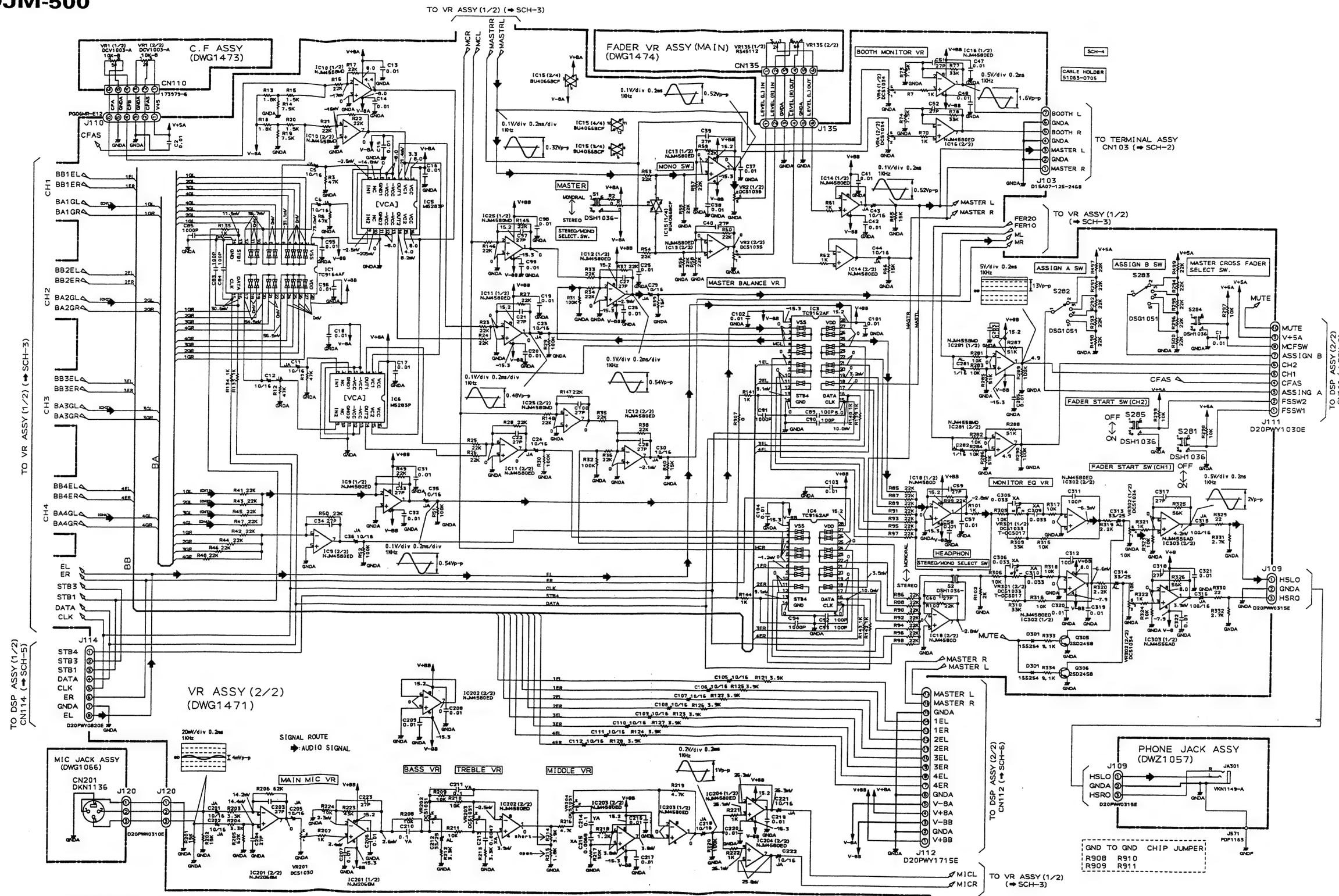
MIC JACK ASSY

CN101
CN102
To TERMINAL ASSY

CN114
CN123
To DSP ASSY

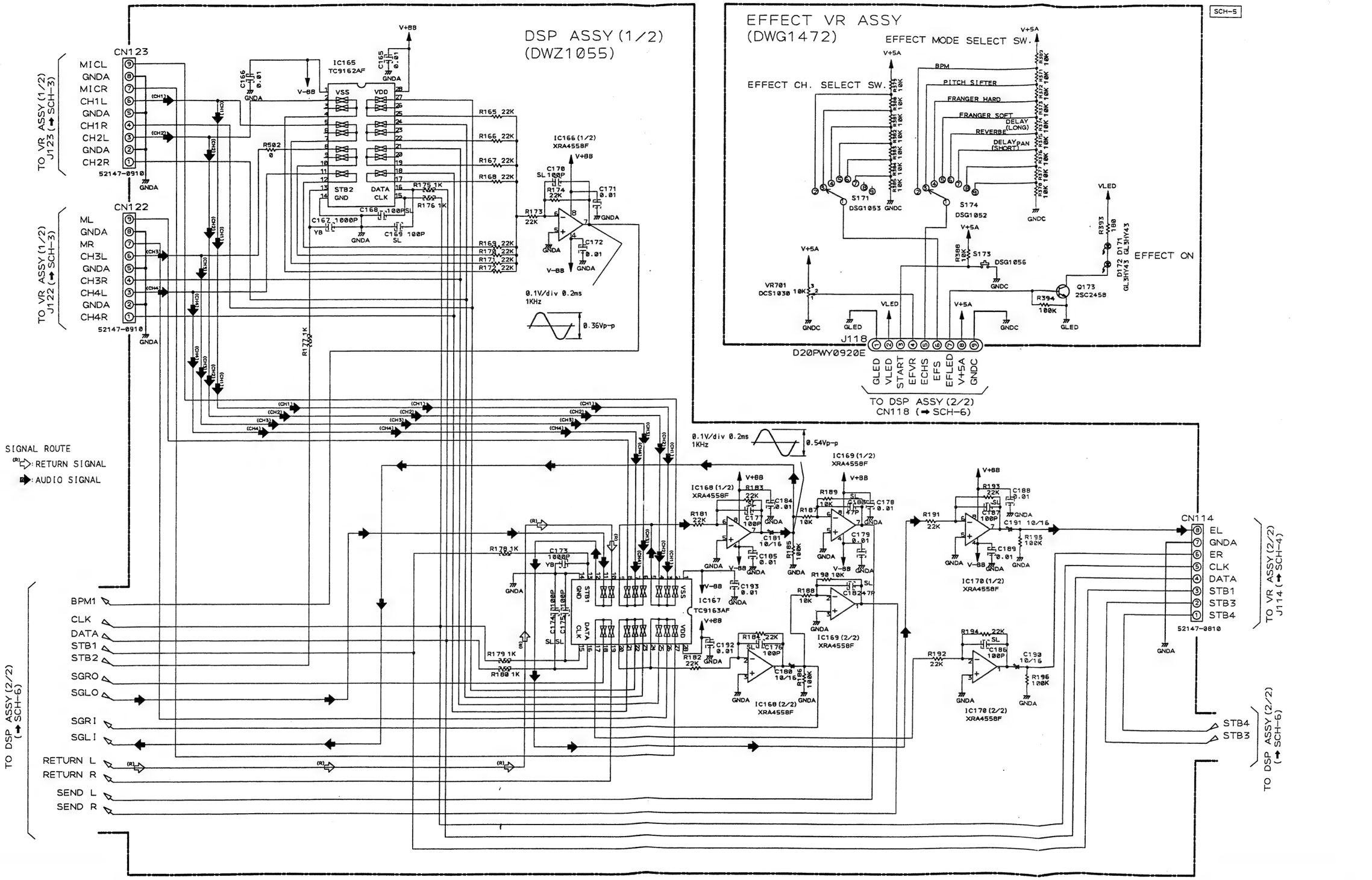
● This diagram is viewed from the mounted parts side.

●この図は部品取付面側から見た図です。



SCH-4 VR ASSY (2/2), C. F. ASSY, PHONE JACK ASSY, MIC JACK ASSY

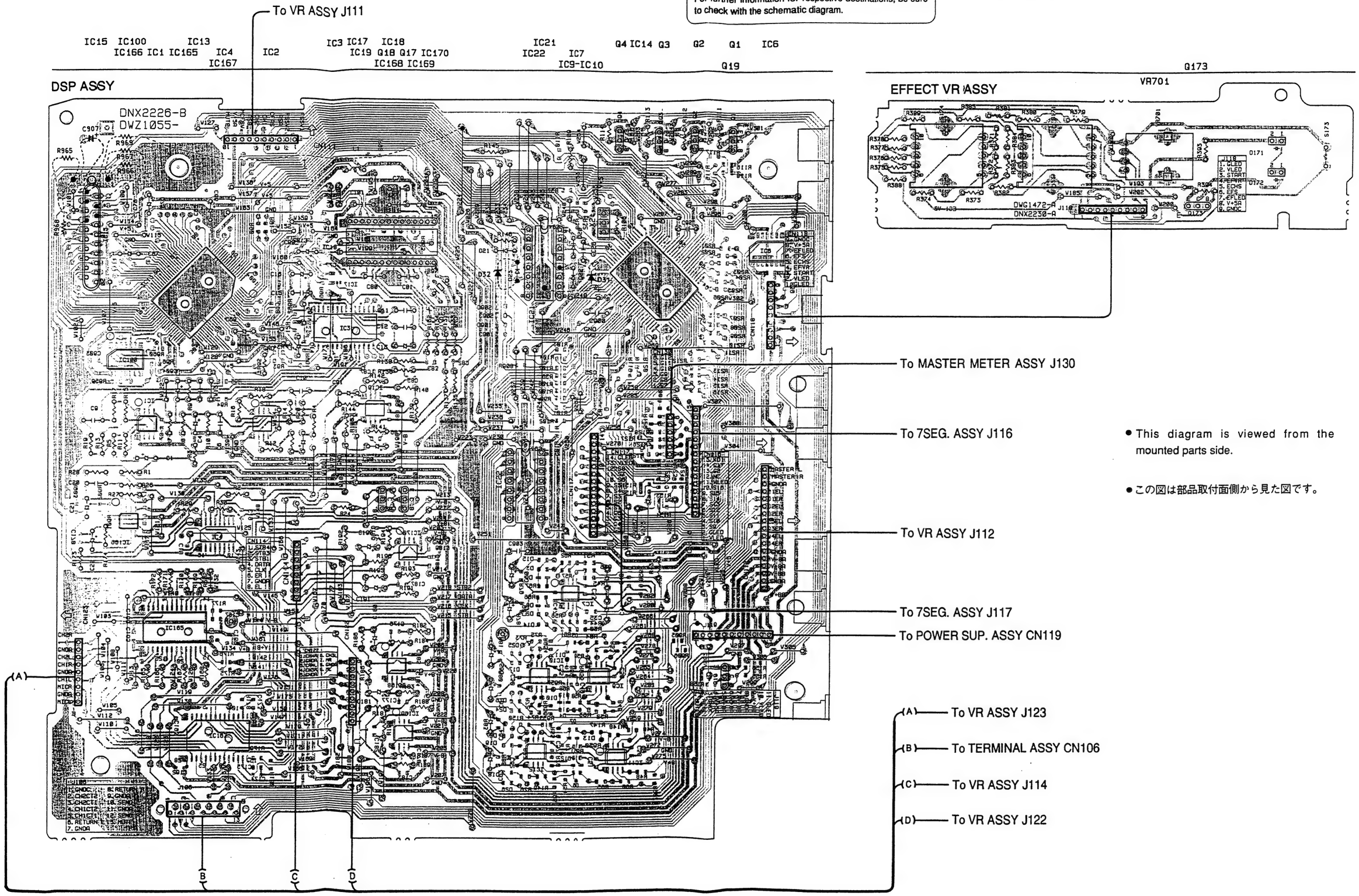
VR ASSY (2/2), C. F. ASSY, PHONE JACK ASSY, MIC JACK ASSY **SCH-4**


DSP ASSY (1/2)
(DWZ1055)
EFFECT VR ASSY
(DWG1472)
SCH-5
EFFECT MODE SELECT SW.
EFFECT CH. SELECT SW.
BPM
PITCH SIFTER
FRANGER HARD
FRANGER SOFT
DELAY (LONG)
REVERBE
DELAY (SHORT)
PAN
EFFECT ON
TO DSP ASSY (2/2)
CN118 (➡ SCH-6)
J118
D20PWY0920E
GLED
VLED
START
EFVR
ECHS
EFS
EFLED
V+5A
GNDC
CN123
CN122
TO VR ASSY (1/2)
J123 (➡ SCH-3)
TO VR ASSY (1/2)
J122 (➡ SCH-3)
52147-0910
MICL
GNDA
MICR
CH1L
CH1R
CH2L
CH2R
ML
MR
CH3L
CH3R
CH4L
CH4R
IC165
TC9162AF
VSS
VDD
STB2
GND
DATA
CLK
IC166 (1/2)
XRA4558F
IC167
TC9163AF
IC168 (1/2)
XRA4558F
IC168 (2/2)
XRA4558F
IC169 (1/2)
XRA4558F
IC169 (2/2)
XRA4558F
IC170 (1/2)
XRA4558F
IC170 (2/2)
XRA4558F
0.1V/div 0.2ms
1KHz
0.36Vp-p
0.54Vp-p
SIGNAL ROUTE
RETURN SIGNAL
AUDIO SIGNAL
TO DSP ASSY (2/2)
(➡ SCH-6)
BPM1
CLK
DATA
STB1
STB2
SGRO
SGLO
SGRI
SGLI
RETURN L
RETURN R
SEND L
SEND R
CN114
TO VR ASSY (2/2)
J114 (➡ SCH-4)
EL
ER
STB4
STB3
TO DSP ASSY (2/2)
(➡ SCH-6)

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

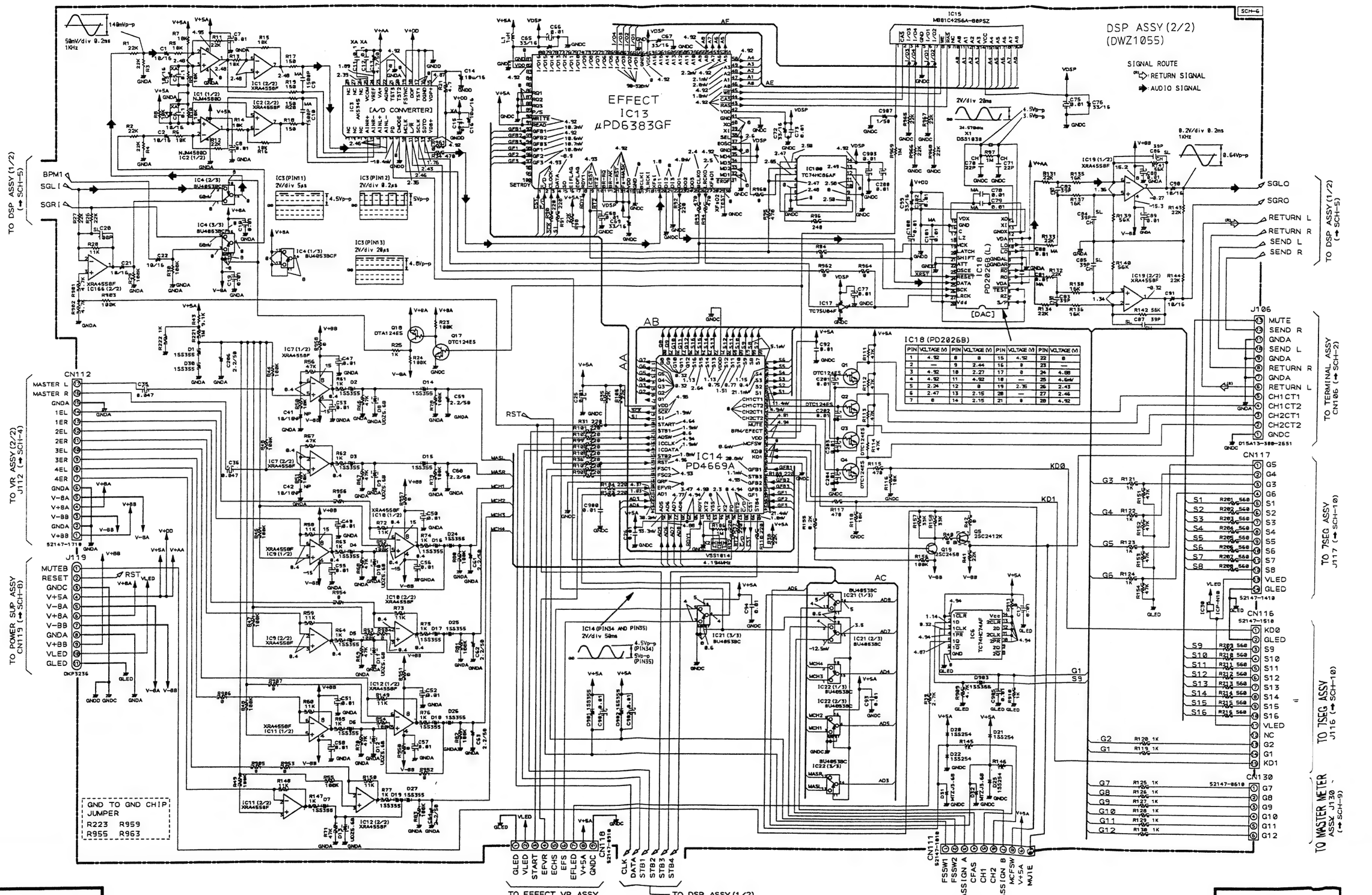
このPCB図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。

PCB－3



- This diagram is viewed from the mounted parts side.
- この図は部品取付面側から見た図です。

)ION-04819 / Druck 10

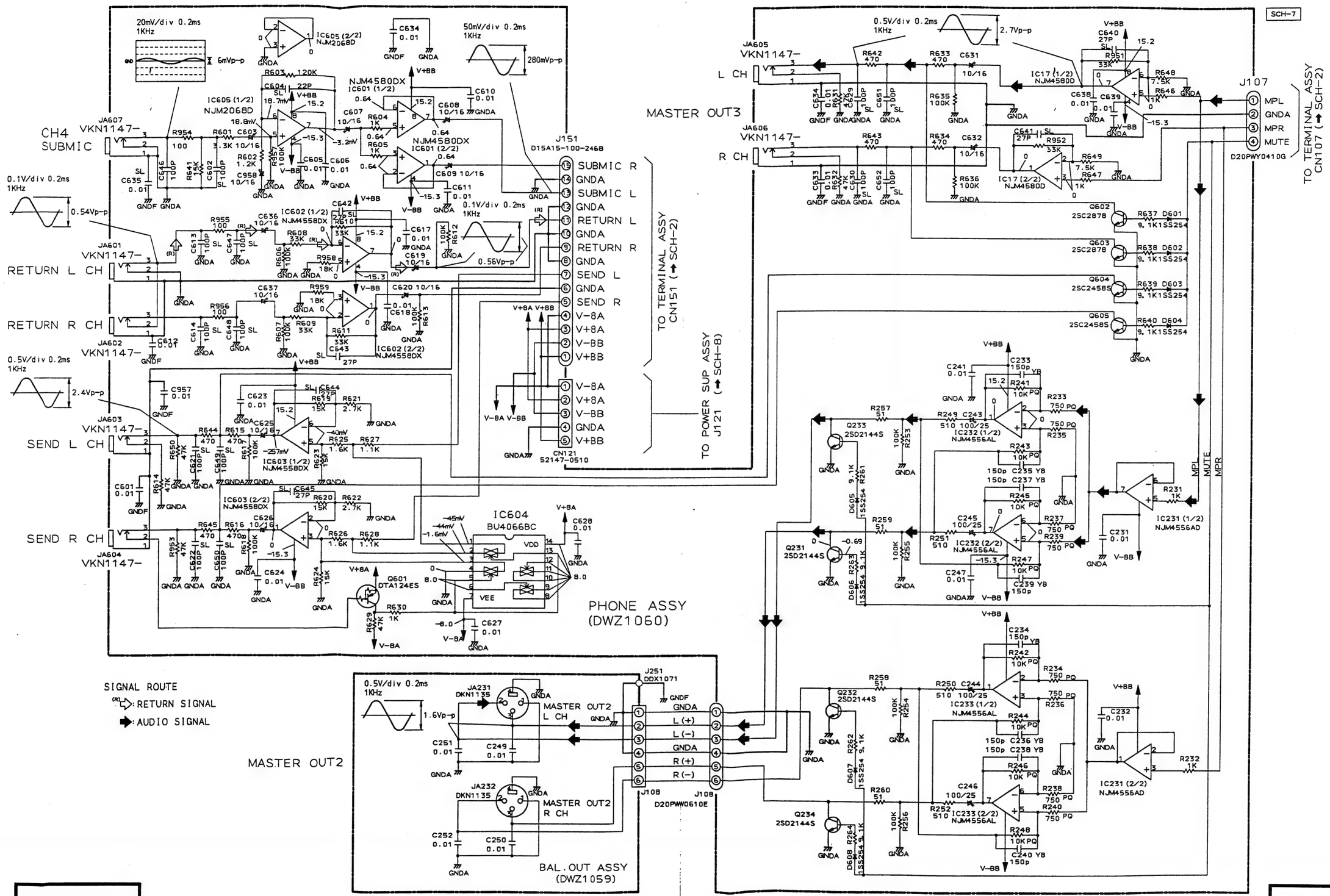


SCH-6 DSP ASSY (2/2)

SCH-6 DSP ASSY (2/2)

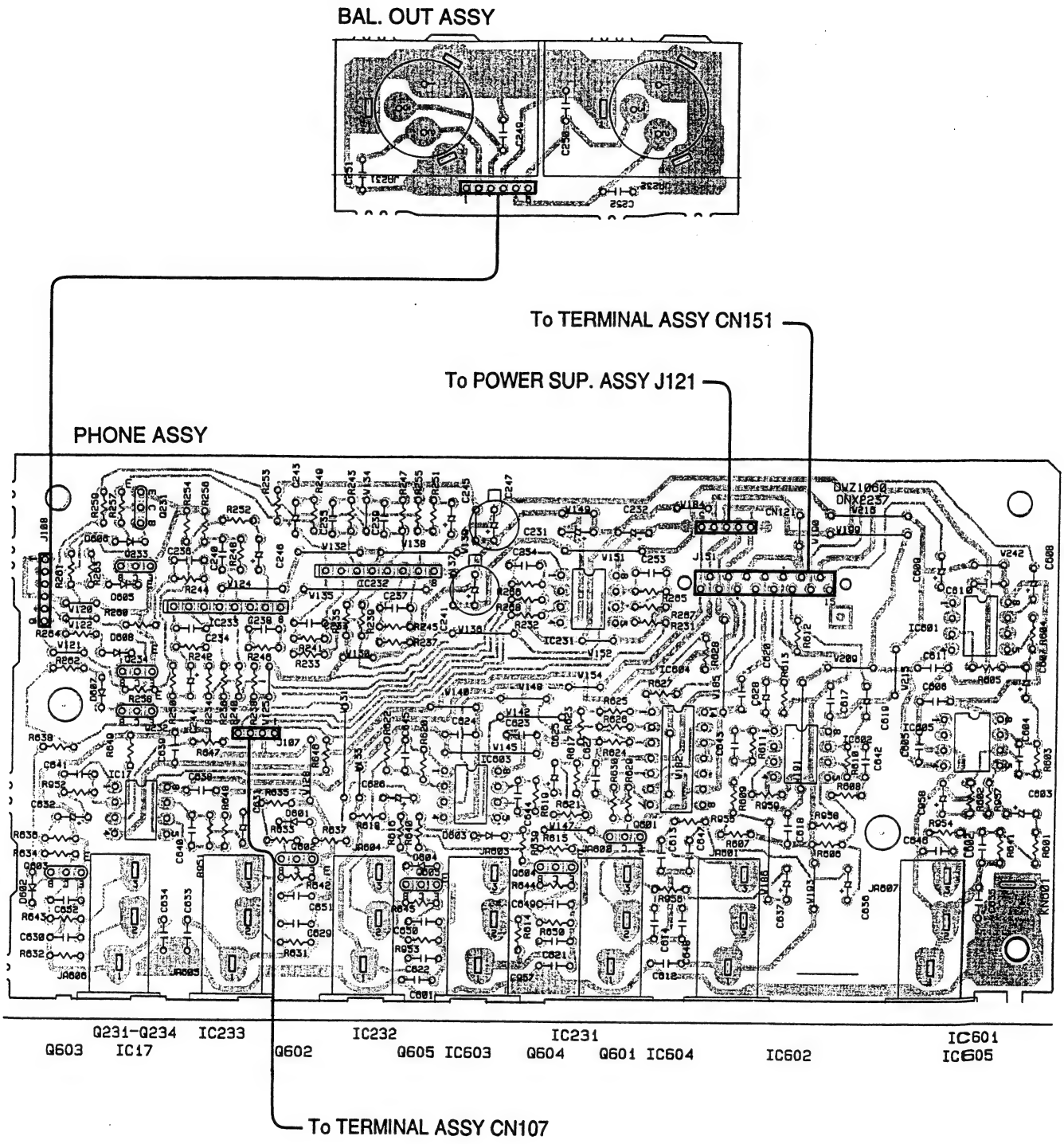
)N-04819 / Druck 11

4.5 PHONE ASSY AND BAL. OUT ASSY



PHONE ASSY, BAL. OUT ASSY SCH-7

PCB－4

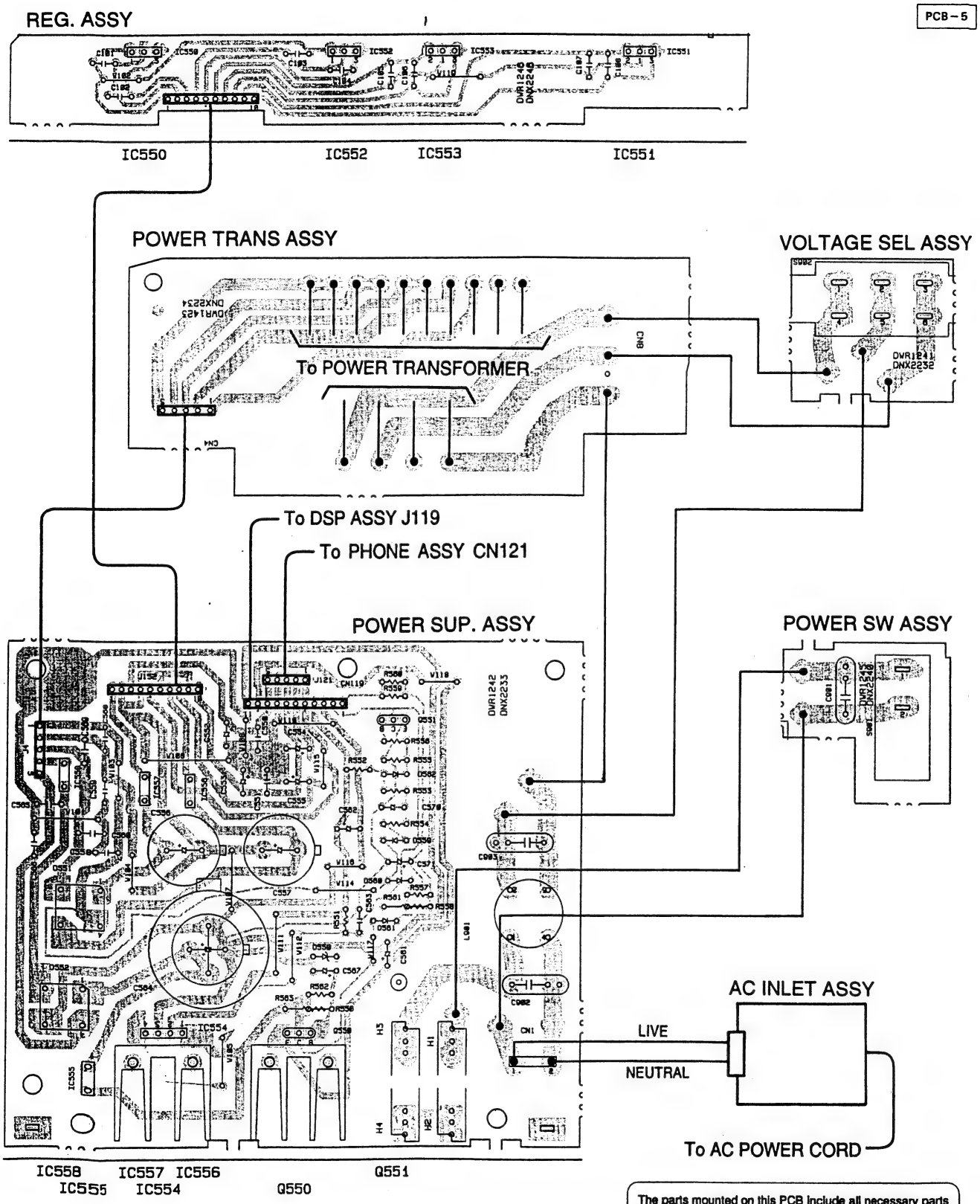


The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

このＰＣＢ図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。

- This diagram is viewed from the mounted parts side.
- この図は部品取付面側から見た図です。

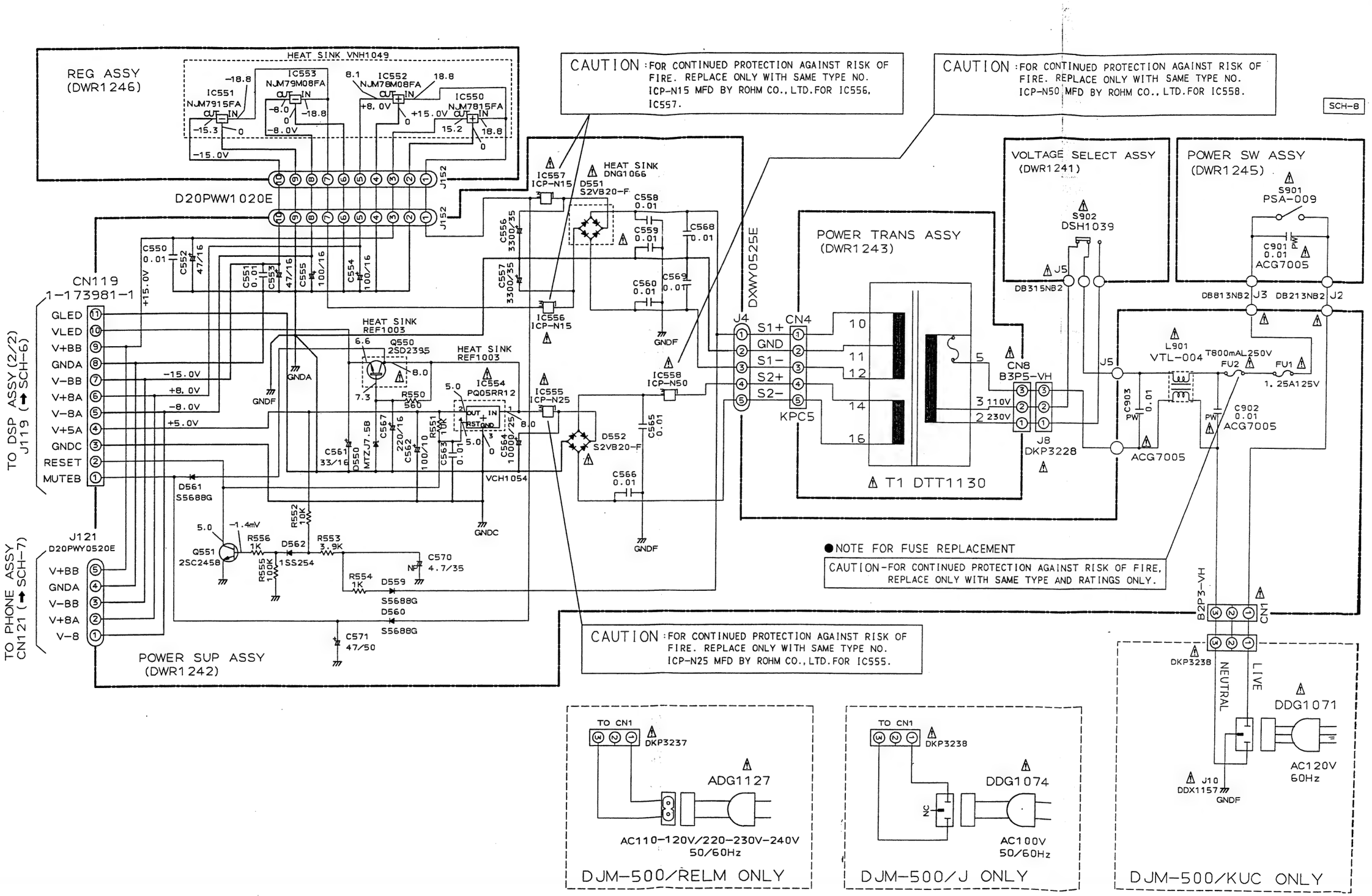
4.6 POWER SUP. ASSY, POWER TRANS ASSY, INLET ASSY, VOLTAGE SEL ASSY, POWER SW ASSY AND REG. ASSY



- This diagram is viewed from the mounted parts side.
- この図は部品取付面側から見た図です。

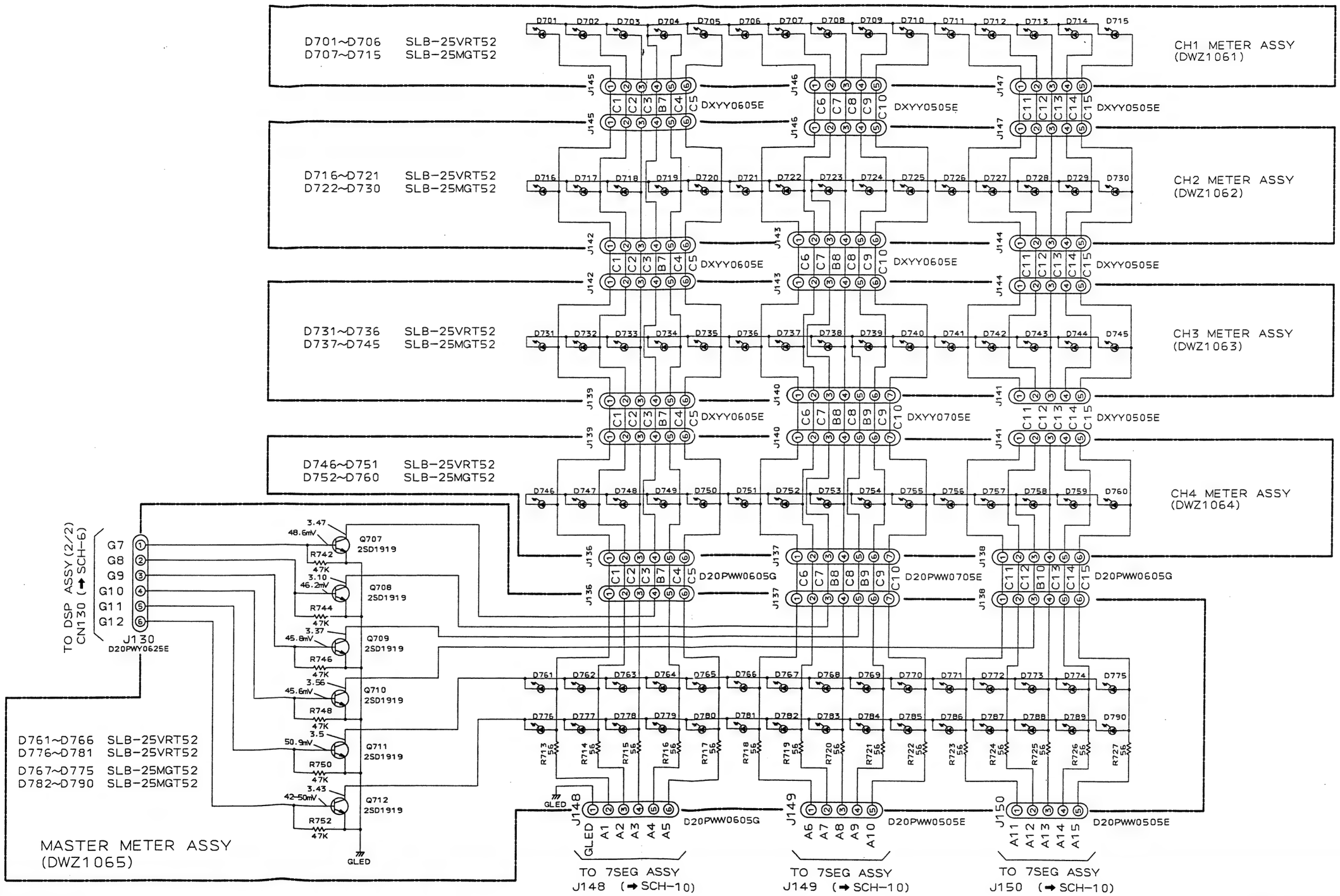
The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

このPCB図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。


REG ASSY
(DWR1246)
HEAT SINK VNH1049
IC553 NJM79M08FA
IC552 NJM78M08FA
IC551 NJM7915FA
IC550 NJM7815FA
-15.0V
D20PWW1020E
J152
CN119
1-173981-1
GLED
VLED
V+BB
GNDA
V-BB
V+8A
V-8A
V+5A
GNDC
RESET
MUTEB
TO DSP ASSY(2/2) J119 (↑SCH-6)
J121
D20PWY0520E
V+BB
GNDA
V-BB
V+8A
V-8
TO PHONE ASSY CN121 (↑SCH-7)
POWER SUP ASSY
(DWR1242)
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N15 MFD BY ROHM CO., LTD. FOR IC556, IC557.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N50 MFD BY ROHM CO., LTD. FOR IC558.
SCH-8
IC557 ICP-N15
HEAT SINK DNG1066
D551 S2VB20-F
IC556 ICP-N15
IC555 ICP-N25
IC558 ICP-N50
D552 S2VB20-F
HEAT SINK REF1003
Q550 2SD2395
IC554 PQ05RR12
VCH1054
D561 S5688G
Q551 2SC2458
D562 1SS254
D559 S5688G
D560 S5688G
C570 4.7/35 NP
C571 47/50
R550 560
R551 10K
R552 10K
R553 3.9K
R554 1K
R555 100K 1W
R556 1K
DXW0525E
J4
CN4
S1+
GND
S1-
S2+
S2-
KPC5
POWER TRANS ASSY
(DWR1243)
T1 DTT1130
CN8 B3P5-VH
J8 DKP3228
VOLTAGE SELECT ASSY
(DWR1241)
S902 DSH1039
J5
DB315NB2
POWER SW ASSY
(DWR1245)
S901 PSA-009
C901 0.01 ACG7005
DB813NB2
J3
DB213NB2
J2
L901 VTL-004
T800mAL250V
FU2
FU1
1.25A125V
C903 0.01
C902 0.01 ACG7005
ACG7005
●NOTE FOR FUSE REPLACEMENT
CAUTION-FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.
B2P3-VH
CN1
DKP3238
NEUTRAL
LIVE
DDG1071
AC120V 60Hz
J10
DDX1157
GNDF
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N25 MFD BY ROHM CO., LTD. FOR IC555.
TO CN1
DKP3237
ADG1127
AC110-120V/220-230V-240V 50/60Hz
DJM-500/RELM ONLY
TO CN1
DKP3238
DDG1074
NC
AC100V 50/60Hz
DJM-500/J ONLY
DJM-500/KUC ONLY

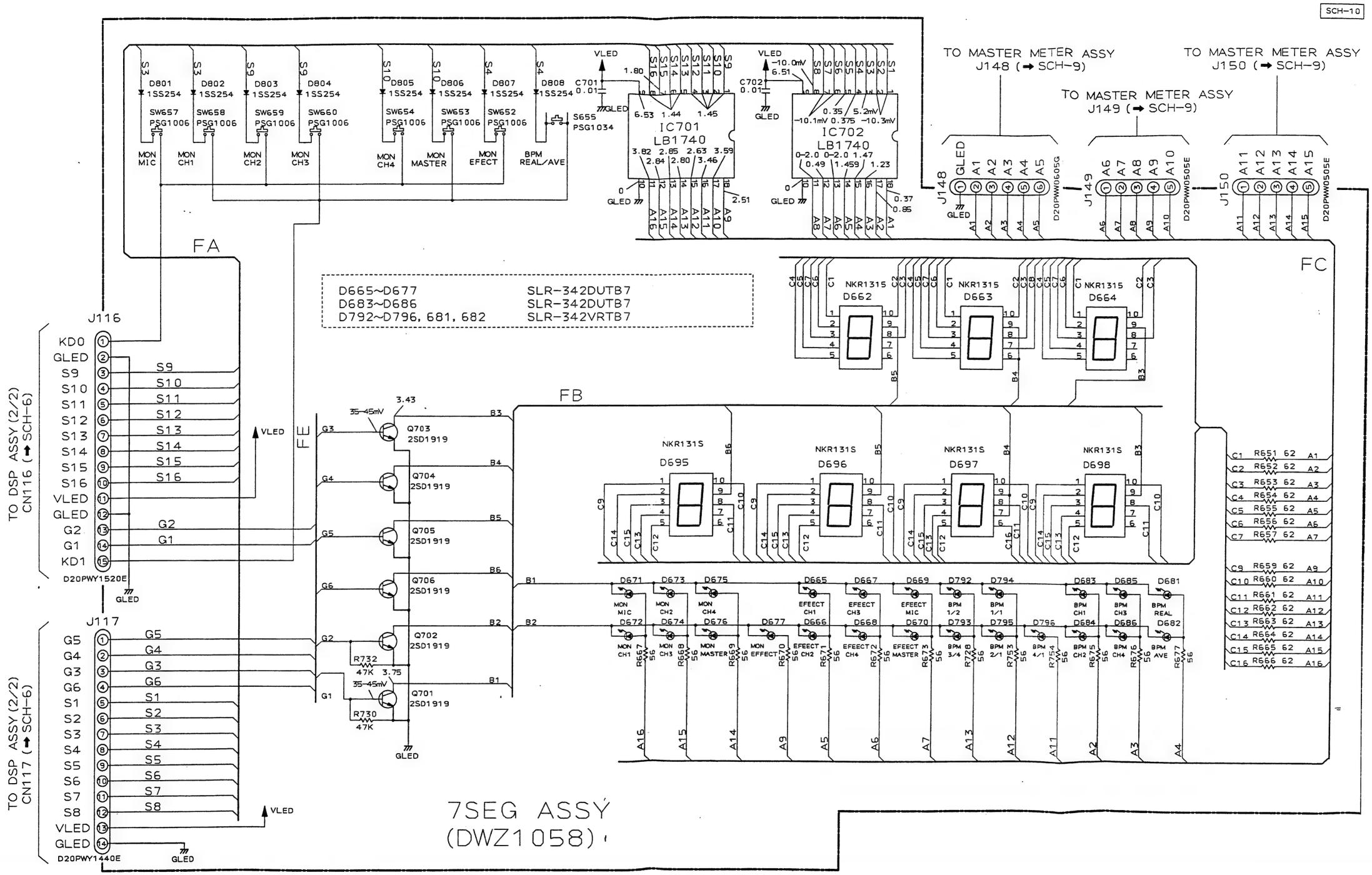
4.7 CH1 METER ASSY, CH2 METER ASSY, CH3 METER ASSY, CH4 METER ASSY, MASTER METER ASSY AND 7SEG. ASSY

SCH-9



SCH-9 CH1 METER ASSY, CH2 METER ASSY, CH3 METER ASSY, CH4 METER ASSY, MASTER METER ASSY

SCH-9 CH1 METER ASSY, CH2 METER ASSY, CH3 METER ASSY, CH4 METER ASSY, MASTER METER ASSY

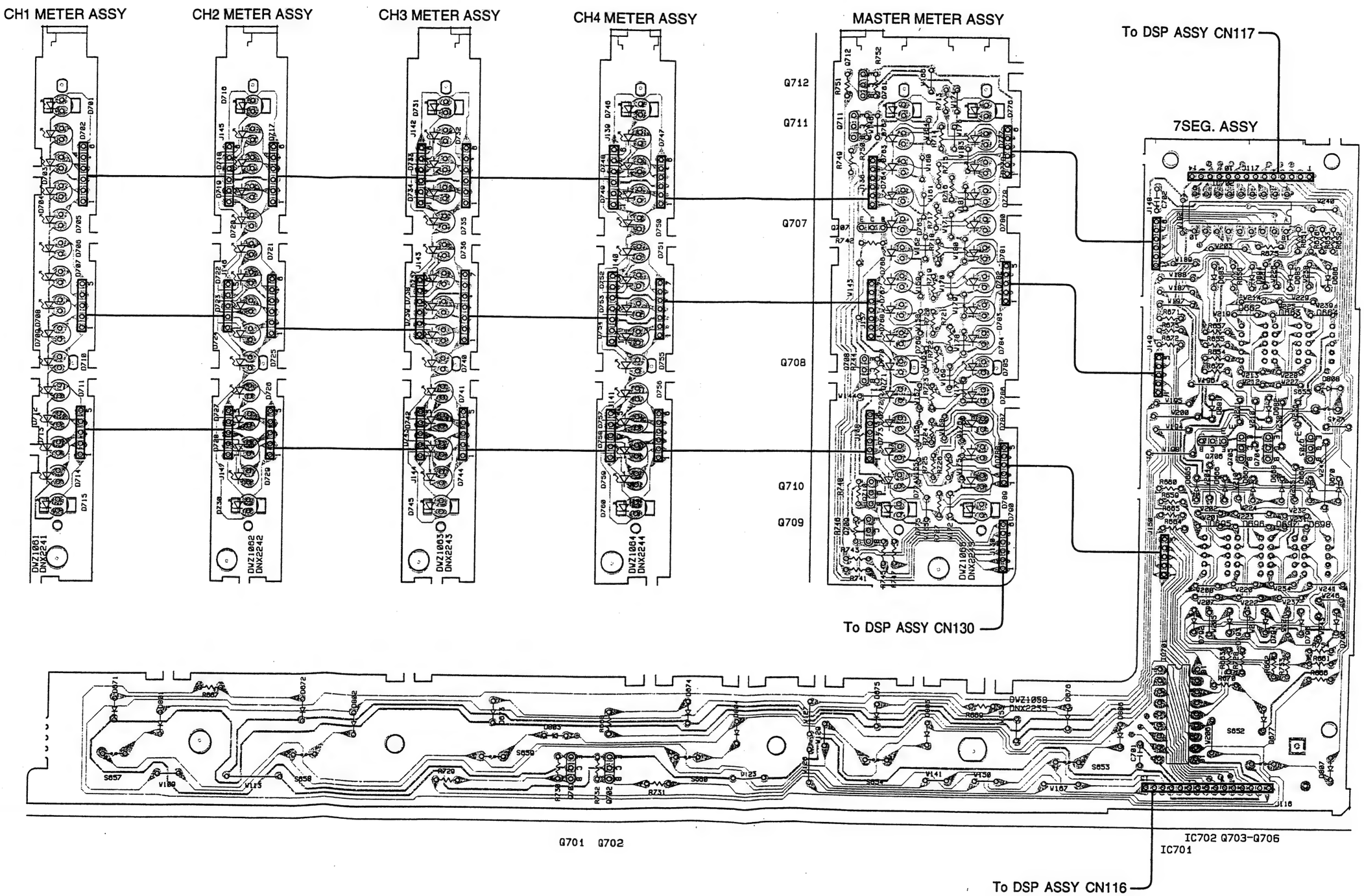

SCH-10
TO MASTER METER ASSY J148 (➡ SCH-9)
TO MASTER METER ASSY J149 (➡ SCH-9)
TO MASTER METER ASSY J150 (➡ SCH-9)
D801 1SS254
D802 1SS254
D803 1SS254
D804 1SS254
D805 1SS254
D806 1SS254
D807 1SS254
D808 1SS254
SW657 PSG1006
SW658 PSG1006
SW659 PSG1006
SW660 PSG1006
SW654 PSG1006
SW653 PSG1006
SW652 PSG1006
S655 PSG1034
MON MIC
MON CH1
MON CH2
MON CH3
MON CH4
MON MASTER
MON EFECT
BPM REAL/AVE
VLED
GLED
C701 0.01
C702 0.01
IC701 LB1740
IC702 LB1740
J148
J149
J150
D20PWW0605G
D20PWW0505E
FA
FB
FC
FE
J116
J117
KD0
GLED
S9
S10
S11
S12
S13
S14
S15
S16
VLED
G2
G1
KD1
G5
G4
G3
G6
S1
S2
S3
S4
S5
S6
S7
S8
D20PWY1520E
D20PWY1440E
TO DSP ASSY (2/2) CN116 (⬆ SCH-6)
TO DSP ASSY (2/2) CN117 (⬆ SCH-6)
Q703 2SD1919
Q704 2SD1919
Q705 2SD1919
Q706 2SD1919
Q702 2SD1919
Q701 2SD1919
R732 47K
R730 47K
NKR1315 D662
NKR1315 D663
NKR1315 D664
NKR131S D695
NKR131S D696
NKR131S D697
NKR131S D698
D665~D677 SLR-342DUTB7
D683~D686 SLR-342DUTB7
D792~D796, 681, 682 SLR-342VRTB7
D671 MON MIC
D673 MON CH2
D675 MON CH4
D672 MON CH1
D674 MON CH3
D676 MON MASTER
D677 MON EFFECT
D665 EFEECT CH1
D667 EFEECT CH3
D669 EFEECT MIC
D666 EFEECT CH2
D668 EFEECT CH4
D670 EFEECT MASTER
D792 BPM 1/2
D794 BPM 1/1
D793 BPM 3/4
D795 BPM 2/1
D796 BPM 4/1
D683 BPM CH1
D685 BPM CH3
D681 BPM REAL
D684 BPM CH2
D686 BPM CH4
D682 BPM AVE
R651 62 A1
R652 62 A2
R653 62 A3
R654 62 A4
R655 62 A5
R656 62 A6
R657 62 A7
R659 62 A9
R660 62 A10
R661 62 A11
R662 62 A12
R663 62 A13
R664 62 A14
R665 62 A15
R666 62 A16
7SEG ASSY (DWZ1058)

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

このPCB図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。

- This diagram is viewed from the mounted parts side.
- この図は部品取付面側から見た図です。

PCB－6



PION-04819 / Druck 16

Mark	No.	Description	Parts No.
DSP ASSY			
SEMICONDUCTORS			
	IC3		AK5345
	IC21, IC22		BU4053BC
	IC4		BU4053BCF
	IC30		ICP-N10
	IC15		MB81C4256A-80PSZ
	IC18		PD2026B (L)
	IC14		PD4669A
	IC6		TC74HC74AF
	IC100		TC74HC86AF
	IC17		TC7SU04F
	IC165		TC9162AF
	IC167		TC9163AF
	IC13		UPD6383GF
	IC1, IC10–IC12, IC166		XRA4558F-P
	IC168–IC170, IC19, IC2, IC7		XRA4558F-P
	IC9		XRA4558F-P
	Q5		2SC2412K
	Q19		2SC2458
	Q18		DTA124ES
	Q1, Q17, Q2–Q4		DTC124ES
	D20–D23		1SS254
	D1, D14–D19, D2		1SS355
	D24–D27, D3, D30		1SS355
	D4–D7, D901–D903		1SS355
	D31, D32		MTZJ3.6B
	D10–D13, D8, D9		UDZ5.6B
COILS AND FILTERS			
	L1		LFA010K
CAPACITORS			
	C20		CCCSL101J50
	C70, C71		CCSQCH220J50
	C168–C170, C174–C177		CCSQSL101J50
	C186, C187		CCSQSL101J50
	C82–C87		CCSQSL390J50
	C182, C183		CCSQSL470J50
	C41, C42		CEANP100M16
	C907		CEAS010M50
	C1, C16, C180, C181		CEAS100M16
	C190, C191, C2, C21, C22		CEAS100M16
	C3, C4, C90, C91		CEAS100M16
	C14		CEAS100M50
	C206, C59–C64		CEAS2R2M50
	C65, C67, C69, C76, C99		CEAS330M16
	C13		CEAS4R7M50
	C11, C12, C15, C5, C6		CFTXA104J50
	C26, C900, C92–C94		CKCYF103Z50
	C167, C173		CKSQYB102K50
	C100, C102, C165, C166, C17		CKSQYF103Z50
	C171, C172, C178, C179, C18		CKSQYF103Z50
	C184, C185, C188, C189, C19		CKSQYF103Z50
	C192, C193, C200–C204		CKSQYF103Z50
	C25, C47		CKSQYF103Z50
	C49–C53, C55–C58, C66		CKSQYF103Z50
	C68, C7, C75, C77, C8		CKSQYF103Z50
	C88, C89, C901–C903, C905		CKSQYF103Z50
	C35, C36		CKSQYF473Z50
	C101, C78–C81		CQMA103J50
	C10, C9		CQMA152J50

Mark	No.	Description	Parts No.
RESISTORS			
	R145, R146, R25		RD1/6PM102J
	R10, R13–R16, R187–R190		RD1/6PM103J
	R5–R9		RD1/6PM103J
	R185, R186, R195, R196		RD1/6PM104J
	R23, R24, R29, R30		RD1/6PM104J
	R106, R969		RD1/6PM105J
	R28		RD1/6PM113J
	R17–R20		RD1/6PM151J
	R135–R138		RD1/6PM163J
	R109, R92		RD1/6PM221J
	R1, R11, R12, R131–R134		RD1/6PM223J
	R143, R144, R165–R174		RD1/6PM223J
	R181–R184, R191–R194, R2		RD1/6PM223J
	R26, R27, R3, R4		RD1/6PM223J
	R965-R968		RD1/6PM223J
	R111–R114		RD1/6PM473J
	R139–R142		RD1/6PM563J
	R43		RN1/6PQ9101F
	Other Resistors		RS1/10S□□□J
OTHERS			
		CABLE HOLDER (13P)	51063–1305
	CN130	6P JUMPER CONNECTOR	52147–0610
	CN114	8P JUMPER CONNECTOR	52147–0810
	CN118, CN122, CN123	9P JUMPER CONNECTOR	52147–0910
	CN111	10P JUMPER CONNECTOR	52147–1010
	CN116	15P JUMPER CONNECTOR	52147–1510
	CN112	17P JUMPER CONNECTOR	52147–1710
	J119	CONNECTOR ASSY	DKP3236
	X1 (F=12.288)		DSS1030
	X2 (4.19MHz)		VSS1014
		PCB BINDER	VEF1008
TERMINAL ASSY			
SEMICONDUCTORS			
	IC801–IC803		NJM2068D
	IC804		NJM4580D
	Q801–Q804		2SC2878
	D801–D804		1SS254
CAPACITORS			
	C851–C882		CCCSL101J50
	C847, C848		CCCSL270J50
	C803, C804, C809, C810		CEAS100M16
	C814, C815, C820, C821		CEAS100M16
	C825, C826, C831, C832		CEAS100M16
	C883–C890		CEAS100M16
	C801, C802, C812, C813		CEAS220M16
	C823, C824		CEAS220M16
	C842, C850		CKCYF103Z50
	C833, C835, C836, C838, C839		CKCYF103Z50
	C205, C990–C993		CKSQYF103Z50
	C843–C846		CQMA152J50
	C805, C806, C816, C817		CQMA222J50
	C827, C828		CQMA222J50
	C807, C808, C818, C819		CQMA681J50
	C829, C830		CQMA681J50
	C837, C840, C841		CGCYX473M25
RESISTORS			
	VR801 (10kΩ–B)		DCS1036
	Other Resistors		RD1/6PM□□□J

Mark	No.	Description	Parts No.
OTHERS			
	CN107	4P JUMPER CONNECTOR	52147–0410
	CN801–CN803, CN807	PIN JACK (4P)	AKB7015
	CN106	13P JUMPER CONNECTOR	KPE13
	CN101, CN102, CN151	15P JUMPER CONNECTOR	KPE15
	CN103	7P JUMPER CONNECTOR	KPE7
	JA804	PIN JACK (2P)	RKB1041
	JA805, JA806	REMOTE CONTROL JACK	RKN1004
	KN101	EARTH METAL FITTING	VNF1084
VR ASSY			
SEMICONDUCTORS			
	IC15		BU4066BCF
	IC5, IC6		M5283P
	IC201		NJM2068M
	IC303		NJM4556AD
	IC10, IC25, IC281		NJM4558MD
	IC11–IC14, IC16, IC18		NJM4580ED
	IC202–IC204, IC302, IC354, IC355		NJM4580ED
	IC401–IC420, IC9		NJM4580ED
	IC3, IC351, IC353, IC4		TC9162AF
	IC1		TC9164AF
	Q305, Q306		2SC2458
	D301, D302		1SS254
SWITCHES AND RELAYS			
	S282, S283		DSG1051
	S1, S2, S281, S284, S285		DSH1036
	S401–S404		DSK1005
CAPACITORS			
	C317, C318		CCCCH270J50
	C409, C410, C437, C438		CCCSL221J50
	C465, C466, C493, C494		CCCSL221J50
	C203, C204, C21, C22, C223		CCCSL270J50
	C33, C34, C355, C356		CCCSL270J50
	C377, C378, C39, C40		CCCSL270J50
	C405, C406, C433, C434		CCCSL270J50
	C461, C462, C489, C490		CCCSL270J50
	C51, C52		CCCSL270J50
	C100, C27, C28, C59, C60		CCPUSL270J50
	C97		CCPUSL270J50
	C365, C366, C371, C372		CCSQCH101J50
	C83, C84, C89, C90		CCSQCH101J50
	C92, C93		CCSQCH101J50
	C367, C373, C85, C91, C94		CCSQCH102J50
	C513–C520		CCSQCH270J50
	C311, C312		CCSQSL101J50
	C281, C282		CEAL010M50
	C212, C313, C314		CEAL330M25
	C105–C109, C11, C110–C112		CEJA100M16
	C12, C201, C202, C205, C218		CEJA100M16
	C221, C222, C23, C24		CEJA100M16
	C29, C30, C35, C359, C36		CEJA100M16
	C360, C43, C44		CEJA100M16
	C375, C376		CEJA101M10
	C315, C316		CEJA101M16
	C419, C420, C447, C448		CEJA330M16
	C475, C476, C503, C504		CEJA330M16
	C5, C6		CEJA330M25
	C427, C428, C455, C456		CEJA470M16

Mark	No.	Description	Parts No.
	C357, C358, C364, C374		CEJA4R7M35
	C305, C306, C309, C310		CFTXA333J50
	C213		CFTXA472J50
	C215		CFTXA682J50
	C210, C211, C214		CFTYA104J50
	C415, C416, C443, C444		CFTYA123J50
	C471, C472, C499, C500		CFTYA123J50
	C413, C414, C441, C442		CFTYA154J50
	C469, C470, C497, C498		CFTYA154J50
	C407, C408, C435, C436		CFTYA333J50
	C463, C464, C491, C492		CFTYA333J50
	C421, C422, C449, C450		CFTYA683J50
	C477, C478, C505, C506		CFTYA683J50
	C101, C103, C104, C15, C16		CKPUYF103Z25
	C19, C20, C207–C209		CKPUYF103Z25
	C216, C217, C219, C220		CKPUYF103Z25
	C37, C38, C41, C411, C417		CKPUYF103Z25
	C42, C439, C445, C467, C47		CKPUYF103Z25
	C473, C48, C495, C501		CKPUYF103Z25
	C1, C102, C13, C14, C2, C17, C18		CKSQYF103Z50
	C206, C25, C26, C283, C285		CKSQYF103Z50
	C31, C319, C32, C320–C322		CKSQYF103Z50
	C351–C354, C379, C380		CKSQYF103Z50
	C383, C384, C403, C404, C412		CKSQYF103Z50
	C418, C423–C426, C431, C432		CKSQYF103Z50
	C440, C446, C451–C454		CKSQYF103Z50
	C459, C460, C468, C474		CKSQYF103Z50
	C479–C482, C487, C488, C496		CKSQYF103Z50
	C502, C507–C510, C57, C58		CKSQYF103Z50
	C95, C96, C98, C99		CKSQYF103Z50
RESISTORS			
	VR201 (10kΩ–B)		DCS1030
	VR202–VR204 (10kΩ–B)		DCS1031
	VR405–VR416 (10kΩ–B)		DCS1032
	VR301 (100kΩ–B)		DCS1033
	VR302, VR4 (10kΩ–B)		DCS1034
	VR401–VR404 (20kΩ–B)		DCS1038
	VR2 (10kΩ–M+N)		DCS1035
	R101, R207, R221, R222		RD1/6PM102J
	R321, R322, R61, R62, R70		RD1/6PM102J
	R208–R211, R224, R305, R306		RD1/6PM103J
	R315–R318, R323, R324		RD1/6PM103J
	R220, R29–R32, R351–R353		RD1/6PM104J
	R362, R363, R368, R369, R386		RD1/6PM104J
	R51, R52		RD1/6PM104J
	R218		RD1/6PM122J
	R201, R202, R65, R66		RD1/6PM153J
	R102		RD1/6PM202J
	R413, R414, R435, R436		RD1/6PM203J
	R457, R458, R479, R480		RD1/6PM203J
	R329, R330		RD1/6PM220J
	R319, R320		RD1/6PM222J
	R100, R145–R148, R23–R28		RD1/6PM223J
	R33–R35, R354, R355		RD1/6PM223J
	R358, R359, R36, R364–R367		RD1/6PM223J
	R37, R38, R403, R404, R409		RD1/6PM223J
	R41, R410, R42, R425, R426		RD1/6PM223J
	R43, R431, R432, R44		RD1/6PM223J
	R447, R448, R45, R453, R454		RD1/6PM223J
	R46, R469, R47, R470		RD1/6PM223J
	R475, R476, R48, R489, R49		RD1/6PM223J

5. PCB PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 x 10¹ = 561 ..... RD1/4PU 5 6 1 J
47kΩ → 47 x 10³ = 473 ..... RD1/4PU 4 7 3 J
0.5Ω → 0R5 ..... RN2H 0 R 5 K
1Ω → 1R0 ..... RS1P 1 R 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 x 10¹ = 5621 ..... RM1/4PC 5 6 2 1 F

Mark	No.	Description	Parts No.
LIST OF PCB ASSEMBLIES			
NSP		DSP ASSY	DWX1655
NSP		├ EFFECT VR ASSY	DWG1472
NSP		├ FADER VR ASSY (MAIN)	DWG1474
NSP		├ FADER VR ASSY (CH1)	DWG1475
NSP		├ FADER VR ASSY (CH2)	DWG1476
NSP		├ FADER VR ASSY (CH3)	DWG1477
NSP		├ FADER VR ASSY (CH4)	DWG1478
		├ DSP ASSY	DWZ1055
		└ TERMINAL ASSY	DWZ1056
NSP		VR ASSY	DWM1530
		├ VR ASSY	DWG1471
NSP		├ PHONE JACK ASSY	DWZ1057
NSP		└ MIC JACK ASSY	DWZ1066
NSP		SUB ASSY	DWM1531
NSP		├ C.F ASSY	DWG1473
NSP		├ VOLTAGE SELECT ASSY	DWR1241
		├ POWER SUP. ASSY	DWR1242
NSP		├ POWER TRANS ASSY	DWR1243
NSP		├ INLET ASSY	DWR1244
NSP		├ POWER SW ASSY	DWR1245
NSP		├ REG. ASSY	DWR1246
		├ 7SEG. ASSY	DWZ1058
NSP		├ BAL. OUT ASSY	DWZ1059
		├ PHONE ASSY	DWZ1060
NSP		├ CH1 METER ASSY	DWZ1061
NSP		├ CH2 METER ASSY	DWZ1062
NSP		├ CH3 METER ASSY	DWZ1063
NSP		├ CH4 METER ASSY	DWZ1064
		└ MASTER METER ASSY	DWZ1065
EFFECT VR ASSY			
SEMICONDUCTORS			
	Q173		2SC2458
	D171, D172		GL3HY43
SWITCHES AND RELAYS			
	S174		DSG1052
	S171		DSG1053
	S173		DSG1056
RESISTORS			
	VR701 (10kΩ-B)		DCS1030
	Other Resistors		RD1/6PM□□□J

Mark	No.	Description	Parts No.
FADER VR ASSY (MAIN)			
RESISTORS			
	VR135 (10kΩ-B)		DCV1004
OTHERS			
	CN135	6P JUMPER CONNECTOR	52151-0610
FADER VR ASSY (CH1)			
RESISTORS			
	VR131 (10kΩ-B)		DCV1004
OTHERS			
	CN131	6P JUMPER CONNECTOR	52151-0610
FADER VR ASSY (CH2)			
RESISTORS			
	VR132 (10kΩ-B)		DCV1004
OTHERS			
	CN132	6P JUMPER CONNECTOR	52151-0610
FADER VR ASSY (CH3)			
RESISTORS			
	VR133 (10kΩ-B)		DCV1004
OTHERS			
	CN133	6P JUMPER CONNECTOR	52151-0610
FADER VR ASSY (CH4)			
RESISTORS			
	VR134 (10kΩ-B)		DCV1004
OTHERS			
	CN134	6P JUMPER CONNECTOR	52151-0610

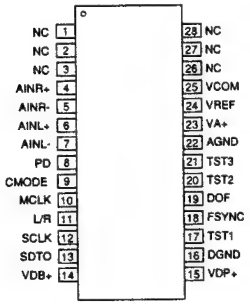
6. IC INFORMATION

● *The Information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagram.*

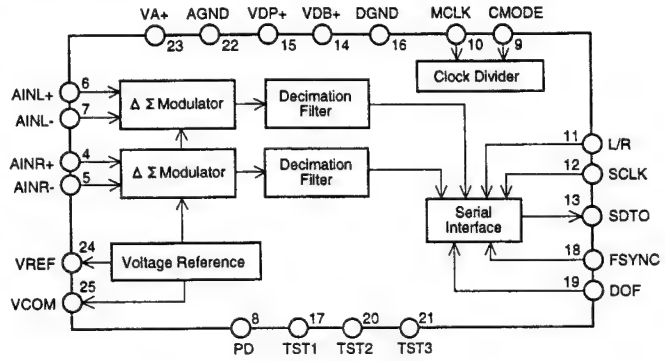
■ AK5345 (IC3: DSP ASSY)

● 16 bit 2ch A/D Converter

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

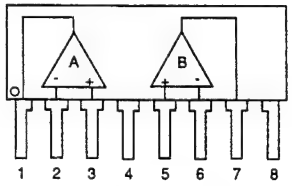
NO.	Pin Name	I/O	Function
1	NC	—	Not used
2	NC	—	
3	NC	—	
4	AINR+	I	Rch analog positive input pin
5	AINR–	I	Rch analog negative input pin
6	AINL+	I	Lch analog positive input pin
7	AINL–	I	Lch analog negative input pin
8	PD	I	Power-down pin Power-down mode is reached at the time of " H ". Offset calibration starts from " ↓ ". Calibration must be executed once at the time of power ON and when the clock frequency has been changed.
9	CMODE	I	Master clock selection pin " L ": CLK = 256fs (12.288MHz @ fs = 48kHz) " H ": CLK = 384fs (18.432MHz @ fs = 48kHz)
10	MCLK	I	Master clock input pin CMODE = " H ": 384fs CMODE = " L ": 256fs
11	L/R	I	Input channel selection pin fs clock is entered. At the time of DOF = " L ", Lch is put out with " H " and Rch is put out with " L ". At the time of DOF = " H ", the polarity is reversed.
12	SCLK	I	Serial data clock pin 1 bit of the output data is put out with " ↓ " of this pin. A clock of 32fs to 64 fs is given as input.

NO.	Pin Name	I/O	Function
13	SDTO	O	Serial data output pin The data are put out as 2's complement, MSB first, 16 bit front justified data. " L " is put out after 16 bit output. " L " at the time of power-down (PD = " H ").
14	VDB+	—	Digital part power supply pin, +5 V (silicon substrate potential)
15	VDP+	—	Digital part power supply pin, +5 V
16	DGND	—	Digital part ground pin
17	TST1	I	Test pin Set to open or " L ".
18	FSYNC	I	Frame sync clock pin At the time of " H ", SDATA is shifted according to SCLK.
19	DOF	I	Digital output format pin " L ": Front justified " H ": I²S compatible format
20	TST2	O	Test pin Set to open for use.
21	TST3	O	
22	AGND	—	Analog ground pin
23	VA+	—	Analog power supply pin, +5 V
24	VREF	O	Reference voltage output pin, (VA +) –3.0 V Connect an electrolytic capacitor of 10 μ F or less and a ceramic capacitor of 0.1 μ F between VA + and VREF.
25	VCOM	O	Common voltage output pin, (VA +) –2.5 V Connect a ceramic capacitor of 0.1 μ F between VA + and VCOM.
26	NC	—	Not used
27	NC	—	
28	NC	—	

■ NJM4556AL (IC232, IC233: PHONE ASSY)

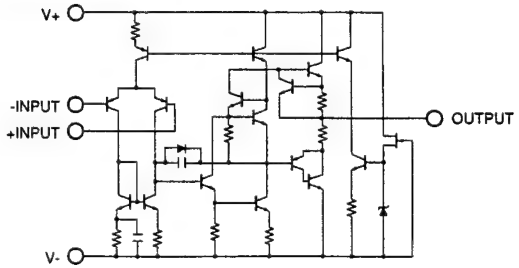
● OP-AMP IC

● Pin Assignment



1. A OUTPUT
2. A -INPUT
3. A +INPUT
4. V-
5. B +INPUT
6. B -INPUT
7. B OUTPUT
8. V+

● Block Diagram



Mark	No.	Description	Parts No.
	R490–R498, R50, R53–R60		RD1/6PM223J
	R99		RD1/6PM223J
	R331, R332		RD1/6PM272J
	R217		RD1/6PM303J
	R203, R204, R212, R213		RD1/6PM332J
	R309, R310, R360, R361		RD1/6PM333J
	R77, R78		RD1/6PM333J
	R417, R418, R439, R440		RD1/6PM393J
	R461, R462, R483, R484		RD1/6PM393J
	R223		RD1/6PM433J
	R407, R408, R411, R412		RD1/6PM471J
	R415, R416, R429, R430		RD1/6PM471J
	R433, R434, R437, R438		RD1/6PM471J
	R451, R452, R455, R456		RD1/6PM471J
	R459, R460, R473, R474		RD1/6PM471J
	R477, R478, R481, R482		RD1/6PM471J
	R216, R219, R356, R357		RD1/6PM472J
	R12, R3, R6, R9		RD1/6PM473J
	R405, R406		RD1/6PM562J
	R419, R420, R427, R428		RD1/6PM562J
	R441, R442, R449, R450		RD1/6PM562J
	R463, R464, R471, R472		RD1/6PM562J
	R485, R486		RD1/6PM562J
	R325, R326		RD1/6PM563J
	R205, R206		RD1/6PM623J
	R73, R74		RD1/6PM752J
	R333, R334		RD1/6PM912J
	Other Resistors		RS1/10S□□□J
OTHERS			
		CABLE HOLDER (7P)	51063–0705
		CABLE HOLDER (15P)	51063–1505
	J110	CONNECTOR	PG06MR–E12

PHONE JACK ASSY

OTHERS

	J109	3P JUMPER WIRE	D20PWW0315E
	JA301	HEADPHONE JACK	VKN1149

MIC JACK ASSY

OTHERS

	J120	3P JUMPER WIRE	D20PWW0310E
	CN201	CONNECTOR	DKN1136

C.F ASSY

RESISTORS

	VR1 (10k Ω–B)		DCV1003

OTHERS

	CN110	MT CONNECTOR (6P)	173979–6

VOLTAGE SELECT ASSY

SWITCHES AND RELAYS

⚠	S902		DSH1039

OTHERS

⚠	J8	CONNECTOR ASSY	DKP3228

Mark	No.	Description	Parts No.

POWER SUP. ASSY

SEMICONDUCTORS

	IC556, IC557		ICP–N15
	IC555		ICP–N25
	IC558		ICP–N50
⚠	IC554		PQ05RR12
⚠	Q551		2SC2458
⚠	Q550		2SD2395
⚠	D662		1SS254
	D550		MTZJ7.5B
⚠	D551, D552		S2VB20
⚠	D559–D561		S5688G

COILS AND FILTERS

⚠	L901		VTL–004

CAPACITORS

⚠	C902, C903 (0.01 μ F/250V)		ACG7005
	C570		CEANP4R7M35
	C562		CEAS101M10
	C554, C555		CEAS101M16
	C567		CEAS221M16
	C561		CEAS330M16
	C556, C557		CEAS332M35
	C552, C553		CEAS470M16
	C571		CEAS4R7M50
	C550, C551, C558–C560, C563		CKCYF103Z50
	C565, C566, C568, C569		CKCYF103Z50
	C564 (10000 μ F/16V)		VCH1054

RESISTORS

	All Resistors		RD1/6PM□□□J

OTHERS

	CN119	MT CONNECTOR (11P)	1–173981–1
	CN1	2P–VH CONNECTOR	B2P3–VH
⚠		HEAT SINK	DNG1066
⚠		HEAT SINK B	REF1003
	H1–H4	FUSE HOLDER	RKR1003

POWER TRANS ASSY

OTHERS

	CN8	3P–VH CONNECTOR	B3P5–VH
	CN4	5P JUMPER CONNECTOR	KPC5

INLET ASSY

INLET UNIT assy has no service part.

POWER SW ASSY

SWITCHES AND RELAYS

⚠	S901		PSA–009

CAPACITORS

⚠	C901 (0.01 μ F/250V)		ACG7005

REG. ASSY

SEMICONDUCTORS

⚠	IC550		NJM7815FA
⚠	IC552		NJM78M08FA
⚠	IC551		NJM7915FA
⚠	IC553		NJM79M08FA

Mark	No.	Description	Parts No.

OTHERS

	J152	JUMPER WIRE (10P)	D20PWW1020E
⚠		HEAT SINK VR	VNH1049

7SEG. ASSY

SEMICONDUCTORS

	IC701, IC702		LB1740
	Q701–Q706		2SD1919
	D801–D808		1SS254
	D662–D664, D695–D698		NKR131S
	D665–D677, D683–D686		SLR–342DUTB7
	D681, D682, D792–D796		SLR–342VRTB7

SWITCHES AND RELAYS

	S652–S654, S657–S660		PSG1006
	S655		RSG1034

CAPACITORS

	C701, C702		CKPUYF103Z25

RESISTORS

	All Resistors		RD1/6PM□□□J

OTHERS

		CUSHION (RUBBER)	REB1105

BAL. OUT ASSY

CAPACITORS

	C249–C252		CKCYF103Z50

OTHERS

	J108	JUMPER WIRE (6P)	D20PWW0610E
	JA231, JA232	3P CANNON CONNECTOR	DKN1135

PHONE ASSY

SEMICONDUCTORS

	IC604		BU4066BC
	IC605		NJM2068D
	IC231		NJM4556AD
	IC232, IC233		NJM4556AL
	IC601–IC603		NJM4558DX
	IC17		NJM4580D
	Q604, Q605		2SC2458
	Q231–Q234		2SD2144S
	Q601		DTA124ES
	Q602, Q603		2SC2878
	D601–D608		1SS254

CAPACITORS

	C602, C613, C614, C621, C622		CCCSL101J50
	C629, C630, C646–C652		CCCSL101J50
	C604		CCCSL220J50
	C640–C645		CCCSL270J50
	C603, C607–C609, C619, C620		CEAS100M16
	C625, C626, C631, C632		CEAS100M16
	C636, C637, C958		CEAS100M16
	C243–C246		CEAS101M25
	C231, C232, C241, C247, C601		CKCYF103Z50
	C605, C606, C610–C612		CKCYF103Z50
	C617, C618, C623, C624		CKCYF103Z50
	C627, C628, C633–C635		CKCYF103Z50
	C638, C639, C957		CKCYF103Z50
	C233–C240		CKPUYB151K50

Mark	No.	Description	Parts No.

RESISTORS

	R241–R248		RN1/6PQ1002F
	R233–R240		RN1/6PQ7500F
	Other Resistors		RD1/6PM□□□J

OTHERS

		CABLE HOLDER (15P)	51063–1505
	CN121	5P JUMPER CONNECTOR	52147–0510
	JA601–JA607	MIC JACK	VKN1147
	KN601	EARTH METAL FITTING	VNF1084

CH1 METER ASSY

SEMICONDUCTORS

	D701–D706		SLB–25VRT52
	D707–D715		SLB–25MGT52

OTHERS

		METER HOLDER	DNK3206
	J146, J147	JUMPER WIRE	DXYY0505E
	J145	JUMPER WIRE	DXYY0605E

CH2 METER ASSY

SEMICONDUCTORS

	D716–D721		SLB–25VRT52
	D722–D730		SLB–25MGT52

OTHERS

		METER HOLDER	DNK3206
	J144	JUMPER WIRE	DXYY0505E
	J142, J143	JUMPER WIRE	DXYY0605E

CH3 METER ASSY

SEMICONDUCTORS

	D731–D736		SLB–25VRT52
	D737–D745		SLB–25MGT52

OTHERS

		METER HOLDER	DNK3206
	J141	JUMPER WIRE	DXYY0505E
	J139	JUMPER WIRE	DXYY0605E
	J140	JUMPER WIRE	DXYY0705E

CH4 METER ASSY

SEMICONDUCTORS

	D746–D751		SLB–25VRT52
	D752–D760		SLB–25MGT52

OTHERS

	J136, J138	JUMPER WIRE (6P)	D20PWW0605G
		METER HOLDER	DNK3206

MASTER METER ASSY

SEMICONDUCTORS

	Q707–Q712		2SD1919
	D761–D766, D776–D781		SLB–25VRT52
	D767–D775, D782–D790		SLB–25MGT52

RESISTORS

	All Resistors		RD1/6PM□□□J

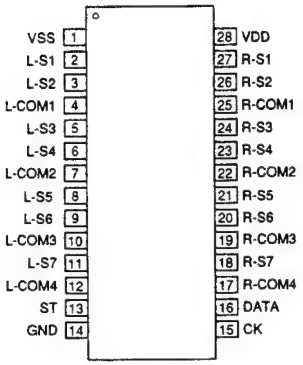
OTHERS

	J148	JUMPER WIRE (6P)	D20PWW0605G
		METER HOLDER	DNK3206

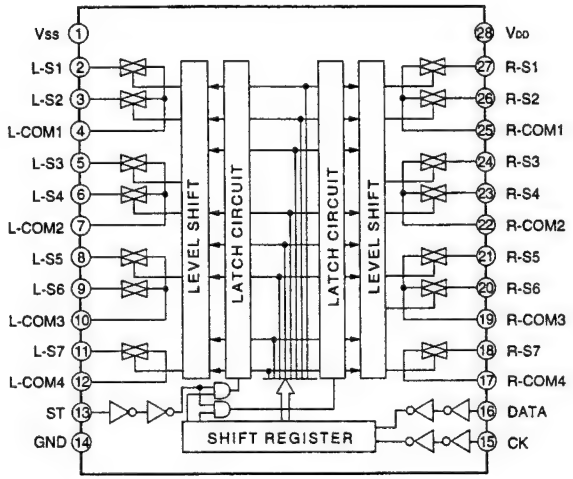
■ TC9162AF (IC3, IC4, IC351, IC353: VR ASSY) (IC165: DSP ASSY)

● Analog Switch Array

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

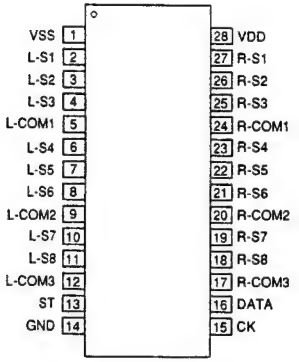
NO.	Pin Name	Description
1	VSS	Power supply (–)
2, 27	S1	Switch input
3, 26	S2	
4, 25	COM1	Switch output
5, 24	S3	Switch input
6, 23	S4	
7, 22	COM2	Switch output
8, 21	S5	Switch input
9, 20	S6	

NO.	Pin Name	Description
10, 19	COM3	Switch output
11, 18	S7	Switch input
12, 17	COM4	Switch output
13	ST	Strobe input
14	GND	Ground
15	CK	Clock input
16	DATA	Data input
28	VDD	Power supply (+)

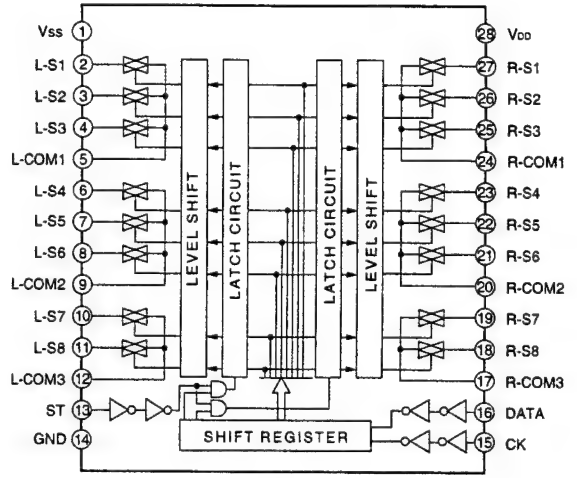
■ TC9163AF (IC167: DSP ASSY)

● Analog Switch Array

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

NO.	Pin Name	Description
1	VSS	Power supply (–)
2, 27	S1	Switch input
3, 26	S2	
4, 25	S3	
5, 24	COM1	Switch output
6, 23	S4	Switch input
7, 22	S5	
8, 21	S6	
9, 20	COM2	Switch output

NO.	Pin Name	Description
10, 19	S7	Switch input
11, 18	S8	
12, 17	COM3	Switch output
13	ST	Strobe input
14	GND	Ground
15	CK	Clock input
16	DATA	Data input
28	VDD	Power supply (+)

DJM-500

■ PD4669A (IC14: DSP ASSY)

● System Control Micro-computer

● Pin Function

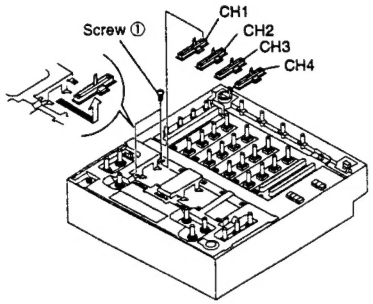
No.	PORT	Pin Name	I/O	Function
1 – 5	P94/FIP6 – P90/FIP2	GRID	O	7 Segment display output
6	P81/FIP1			
7	P82/FIP0			
8	VDD	—	—	Power supply
9	P27/SCK0	XSCK	O	DSP serial communication clock output
10	P26/SO0/SB1	SI	O	DSP serial data output
11	P25/SI0/SB0	XSTART	I	Effect ON/OFF ON: L, OFF: H
12	P24/BUSY	STB1	O	Analog switch IC selection signal 1
13	P23/STB	ADSW	O	Switching analog switch
14	P22/SCK1	ICCLK	O	Analog switch IC serial communication clock output
15	P21/SO1	ICDATA	O	Analog switch IC serial data output
16	P20/SI1	STB2	O	Analog switch IC selection signal 2
17	XRESET	XRST	I	Micro-computer reset H: Reset
18	P74	FSC2	I	CH2 Fader control ON/OFF ON: L
19	P73	FSC1	I	CH1 Fader control ON/OFF ON: L
20	AVSS	GRF	—	GND for A/D converter
21	P17/ANI7	EFVR	I	EFFECT VR
22	P16/ANI6	A/D1	I	EFS: H / ECHS: L
23	P15/ANI5	A/D3	I	MASL: H / MASR: L
24	P14/ANI4	A/D4	I	MCH3: H / MCH4: L
25	P13/ANI3	A/D5	I	MCH1: H / MCH2: L
26	P12/ANI2	A/D6	I	CH1
27	P11/ANI1	A/D7	I	Assign B: H / CH2: L
28	P10/ANI0	A/D8	I	CFAS: H / Assign A: L
29	AVDD	—	—	Power supply for A/D converter
30	AVREF	—	—	A/D converter reference voltage input
31	P04/XT1	RDY1	I	DSP serial communication RDY signal
32	XT2	—	—	Connected to crystal for sub system clock oscillation
33	VSS	—	—	GND
34	X1	—	—	Connected to crystal for main system clock oscillation
35	X2			
36	P37	PD	O	A/D converter (DSP) PD
37	P36/BUZ	XRT2	O	XRST2 (DSP)
38	P35/PCL	XC/D	O	XC/D (DSP)

No.	PORT	Pin Name	I/O	Function	
39	P34/TI2	CS1	O	CS1 (DSP)	
40	P33/TI1	STB4	O	Analog switch IC selection signal 4	
41	P32/TO2	GF3	I	BPM monitor channel selection	" H " level signal
42	P31/TO1	GF2	I		" M " level signal
43	P30/TO0	GF1	I		" L " level signal
44	P03/INTP3/CI0	GFB3	I	BPM effect channel selection	" H " level signal
45	P02/INTP2	GFB2	I		" M " level signal
46	P01/INTP1	STB3	O	Analog switch IC selection signal 3	
47	P00INTP0/TI0	GFB1	I	BPM effect channel selection " L " level signal	
48	IC (VPP)	—	—	Internal connection	
49	P72	KD1	I	Key read	
50	P71	KD0	I		
51	P70	MCFSW	I	Switching fader Closs: L CH:H	
52	—	VDD	—	Power supply +5V	
53	P127/FIP33	BPM/EFEC	O	BPM mode: H Effect mode: L	
54	P126/FIP32	MUTE	O	Mute control Mute: L	
55	P125/FIP31	CH2CT2	O	Player control signal	CH2 STOP:H
56	P124/FIP30	CH2CT1	O		CH2 START:H
57	P123/FIP29	CH1CT2	O		CH1 STOP:H
58	P122/FIP28	CH1CT1	O		CH1 START:H
59	P121/FIP27	SEG	—	7 Segment display output	
60	P120/FIP26				
61	P117/FIP25				
62 – 68	P116/FIP23 – P110/FIP17				
69	P107/FIP17				
70	P106/FIP16				
71	VLOAD	—	—	Connected to FIP driver pull-down resistor.	
72 – 75	P105/FIP15 – P102/FIP12	SEG	—	7 Segment display output	
76	P101/FIP11	GRID	—	7 Segment display output	
77	P100/FIP10				
78 – 80	P97/FIP9 – P95/FIP7				

■ AUTO BMP COUNTER SELECTOR SECTION

● Removal of the Fader VR Assy (Fig. 5)

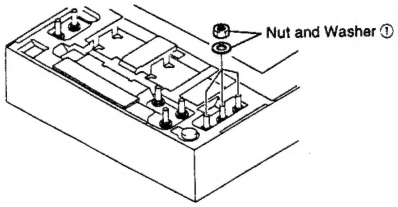
1. Remove the control panel. (Refer to the preceding item.)
2. Remove the two screws ① fixing the Fader VR assy.
3. Slide the Fader VR assy to the side and then raise it.
4. Proceed in the same way for CH2 to CH4.

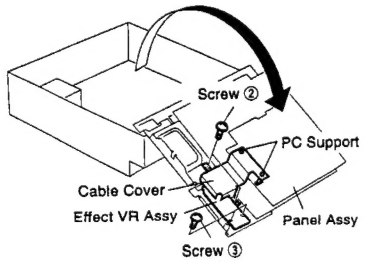


■ EFFECT SELECTOR SECTION

● Removal of the Effect VR Assy (Fig. 6, 7)

1. Remove the control panel. (Refer to the preceding item.)
2. Remove the nut and washer ①.
3. Place the panel assy as shown in the figure.
4. Remove the two screws ② fixing the cable cover and the PC support.
5. Remove the two screws ③ fixing the Effect VR assy.



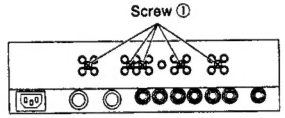


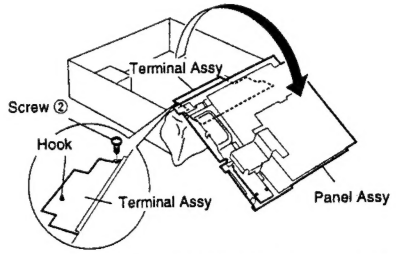
■ REMOVAL OF THE TERMINAL ASSY

1. Remove the control panel. (Refer to the preceding item.) (The knobs don't have to be removed.)
2. Remove the five screws 1 fixing the Terminal assy (at the rear panel).
3. Place the panel assy as shown in the figure.

Note: Place a cloth etc. between the panel and the chassis to prevent damaging the panel surface.

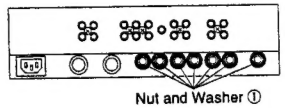
4. Remove the screw ② (PCB) and the hook of the PCB spacer.

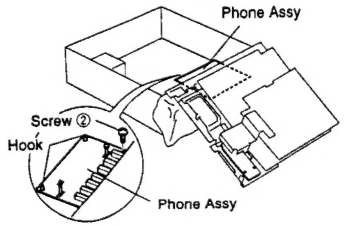




■ REMOVAL OF THE PHONE ASSY

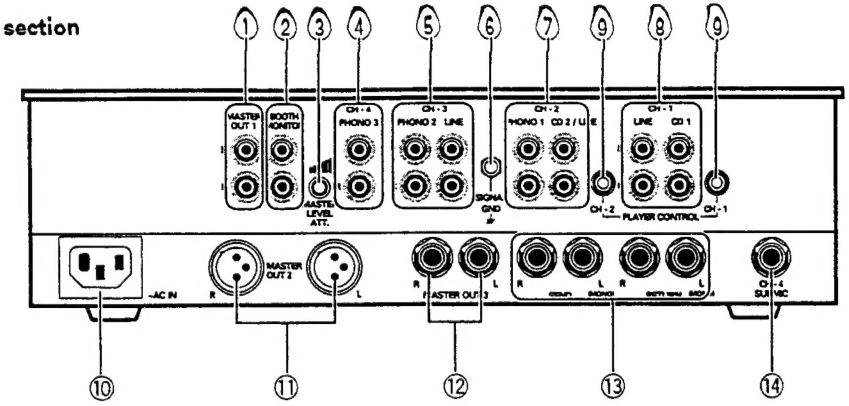
1. Remove the control panel. (Refer to the preceding item.) (The knobs don't have to be removed.)
2. Remove the seven nuts and washers ① fixing the Phone assy (at the rear panel).
3. Remove the Terminal assy. (Refer to the preceding item.)
4. Remove the screw ② (PCB) and the two PC support hooks.





8. PANEL FACILITIES

Rear section



① Master Output 1 Terminal (MASTER OUT 1)
Connects the power amplifier using a cord with RCA plug.

② Booth Monitor Output Terminal (BOOTH MONITOR)
Connects the power amplifier which connects the speaker for monitoring audio.

③ Master Output Level Adjustment Knob (MASTER LEVEL ATT.)

④ CH-4 Phono Input Terminal (PHONO 3)
PHONO 3 : Connects the analog player. (for MM only)

⑤ CH-3 Input Terminal
PHONO 2 : Connects the analog player. (for MM only)
LINE : Connects audio equipment such as DAT.

⑥ Ground Terminal (SIGNAL GND)
Connects to the GND cord of the analog player.

> This terminal is for only an analog player, not for a safety ground.

⑦ CH-2 Input Terminal
PHONO 1 : Connects to the analog player. (for MM only)
CD/LINE : Connects optional CD players such as CDJ-500Ⅱ.

⑧ CH-1 Input Terminal
LINE : Connects audio equipment such as a cassette deck, etc.
CD : Connects optional CD players such as the CDJ-500Ⅱ.

⑨ CH-1, 2 Player Control Terminal
When connecting the optional CDJ-500Ⅱ or CDJ-500G to the CD terminals of CH-1 or CH-2, the fader start function can be used by connecting this terminal to the control terminal of the player.

⑩ Power Cord Connection Terminal
Connects the power cord provided.

⑪ Master Output 2 Terminal (MASTER OUT 2)
Connects the XLR input supporting power amplifier.

⑫ Master Output 3 Terminal (MASTER OUT 3)
Connects the PHONE input supporting power amplifier.

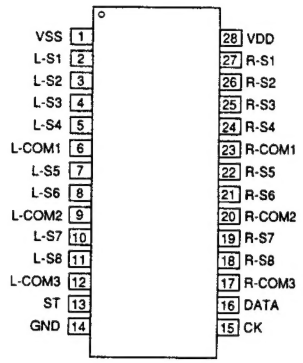
⑬ External Effector Connecting Terminal (SEND, RETURN)
Used to connect other equipment for adjusting sound.
SEND (Output) : Connects the input terminal of the external effector.
Uses L channel output for using the effector of monaural input.
The sound that L and R are mixed will be sent to the effector.
RETURN (Input) : Connects the output terminal of the external effector.
Uses L channel input for using the effector of monaural input. It will be input to both channels L and R.

⑭ CH-4 Sub Microphone Input Terminal (SUB MIC)

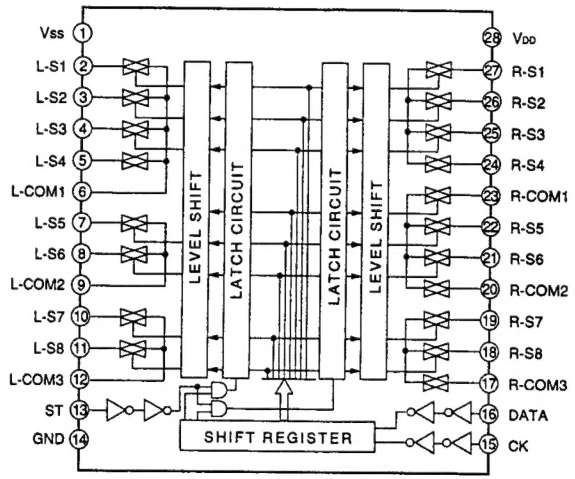
■ TC9164AF (IC1: VR ASSY)

● Analog Switch Array

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

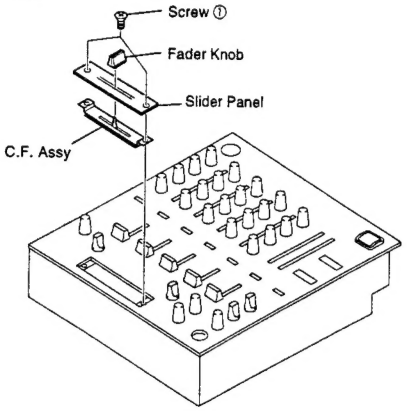
NO.	Pin Name	Description
1	VSS	Power supply (–)
2, 27	S1	Switch input
3, 26	S2	
4, 25	S3	
5, 24	S4	
6, 23	COM1	Switch output
7, 22	S5	Switch input
8, 21	S6	
9, 20	COM2	Switch output

NO.	Pin Name	Description
10, 19	S7	Switch input
11, 18	S8	
12, 17	COM3	Switch output
13	ST	Strobe input
14	GND	Ground
15	CK	Clock input
16	DATA	Data input
28	VDD	Power supply (+)

7. DISASSEMBLY

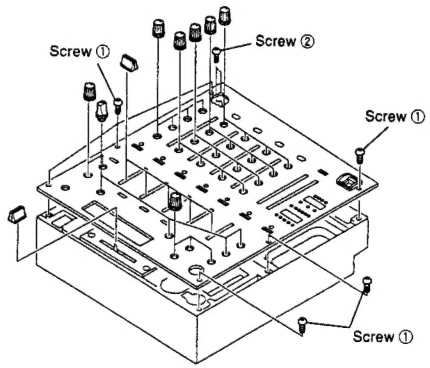
■ CROSS-FADER SECTION (Fig. 1)

1. Remove the fader knob.
2. Remove the two screws ① fixing the slider panel.
3. Raise the C.F. assy at the front and then raise the entire unit.



■ CONTROL PANEL SECTION (Fig. 2)

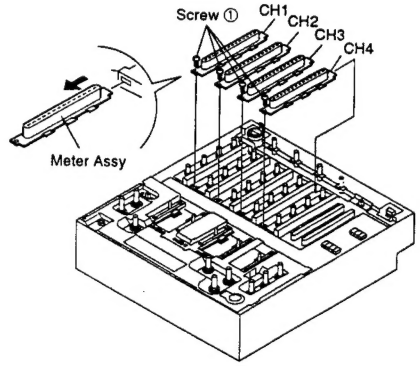
1. Remove all knobs from the control panel surface.
2. Remove the six screws ①.
3. Remove the two screws ② fixing the microphone jack.



■ EQUALIZER SECTION

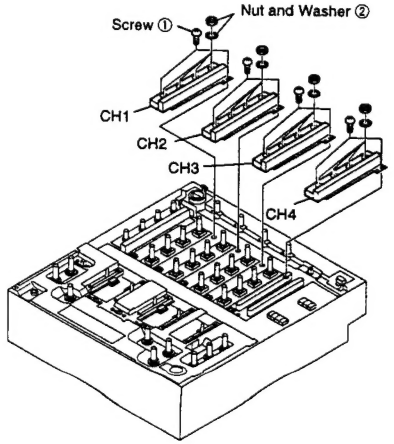
● Removal of the CH1 to CH4 Meter Unit (Fig. 3)

1. Remove the control panel. (Refer to the preceding item.)
2. Remove the four screws ① fixing each meter assy.
3. Slide the meter assy to the front and raise it.
4. Proceed in the same way for CH2 to CH4.



● Removal of Shield Plate (Fig. 4)

1. Remove the control panel. (Refer to the preceding item.)
2. Remove the meter assy. (Refer to the preceding item.)
3. Remove the two screws ① fixing the shield plate.
4. Remove the nut and washer ② fixing the VR, and then remove the shield plate.
5. Proceed in the same way for CH2 to CH4.



⑨ Monitor Monaural/Stereo Selector Switch (MONO/STEREO)

⑩ Monitor Equalizer Knob (MONITOR EQ)
Used to obtain the beat easily with the headphone monitor sound.
Increases/decreases low tone.
Flat at center click.
Increases when rotated to the right. (To +12 dB at 100 Hz)
Decreases when rotated to the left. (To –12 dB at 100 Hz)

⑪ Monitor Level Knob (MONITOR LEVEL)
Used for adjusting the headphone monitor volume.
Not affected by the master volume and master balance.

⑫ Headphone Terminal (PHONES)

⑬ Channel Fader Volume
Used for adjusting the volume of CH1 to CH4.

⑭ Assign Switch (ASSIGN A, B)
When performing cross fader using two sources (A, B), select the channels (CH1 to CH4) to be assigned to A and B.
Effective when the cross fader switch (⑰) is on (cross fader mix).

⑮ Fader Start Switch (FADER START) (Refer to Page 17.)
When the optional CD player (CDJ-500G or CDJ-500Ⅱ) is connected to the unit using the control cord, this ON/OFF switch is used to start automatic playing of the CD player using the channel fader or cross fader.

⑯ Cross Fader Volume (CROSS FADER)
Adjusts the mix volume of the sources set to A and B using the assign switch (⑭).

⑰ Cross Fader Switch (CROSS FADER ON/OFF)
OFF:
Select when mixing sounds using the channel fader volume. (Direct mix.)
ON:
Select when mixing sounds using the cross fader. (Cross fader mix.)

⑱ Master Volume Level Adjustment
Used to adjust the level of the master output volume.
When the cross fader is ON, the sounds of assigns A, B and main microphone will be output.
When the cross fader is OFF, the sounds of each channel and main microphone will be output.

⑲ Master Balance Knob (MASTER BALANCE)
Used to adjust the left and right balance of the master output.

⑳ Booth Monitor Level Knob (BOOTH MONITOR LEVEL)
Used to adjust the output level of the BOOTH MONITOR terminal.
Not affected by the master volume and master balance.

㉑ Effect Selector Switch (EFFECT SELECTOR)
AUTO BPM (Beat/minute):
Select when performing BPM detection.
DELAY:
Delays the time and repeats once.
ECHO:
Delays the time and repeats several times to produce the echo effects.
AUTO PAN:
Shifts the left and right channels periodically.
FLANGER:
Produces periodic sound change effects by mixing the short delay sound and original sound.
REVERB:
Produces the reverb effects.
PITCH SHIFTER:
Changes the pitch of the song.
SEND/RETURN:
Select when connecting and using the external effector.

㉒ Effect Channel Selector (CH. SELECTOR)
Use to select the source to be effected.

㉓ Parameter Knob (PARAMETER)
Used to adjust the parameter of the effector selected with the effect selector switch.
DELAY:
0 to 680 mSec (2 mSec step to 100, 5 mSec step from 100 to 680)
ECHO:
0 to 680 mSec (2 mSec step to 100, 5 mSec step from 100 to 680)
AUTO PAN:
0 to 3500 mSec (5 mSec to 100, 10 mSec from 100 to 900, 20 mSec step from 900 to 3500)
FLANGER:
100 to 9000 mSec (10 mSec to 900, 50 mSec from 900 to 9000)
REVERB:
0 to 100% (1% step)
PITCH SHIFTER:
0 to ±100% (1% from 0 to 10, 2% step from 10 to 100)

㉔ Effect Switch (EFFECT ON/OFF)
Use to switch the effect on/off.
When turned on according to the beat, the effects will also correspond to the beat.
When the effect is on, it goes on and off.

9. SPECIFICATIONS (for KUC type)

Audio Section

Input terminal (Input level/impedance)
CD/LINE ..... –14 dBV (200 mV) / 22 kΩ
PHONO ..... –54 dBV (2 mV) / 47 kΩ
MAIN MIC ..... –54 dBV (2 mV) / 3 kΩ
SUB MIC ..... –60 dBV (1 mV) / 3 kΩ
RETURN ..... –14 dBV (200 mV) / 22 kΩ

Output terminal (Output level/impedance)
MASTER OUT 1 (RCA) ..... 0 dBV (1 V) / 1 kΩ
MASTER OUT 2 (XLR) ..... 4 dBm (1.23 V) / 600 Ω
MASTER OUT 3 (1/4"PHONE) ..... 0 dBV (1 V) / 1 kΩ
BOOTH MONITOR ..... 0 dBV (1 V) / 1 kΩ
SEND ..... 0 dBV (1 V) / 1 kΩ
PHONES ..... –4 dBV (0.63 V) / 22 Ω

Frequency characteristics
CD/LINE ..... 20 Hz to 20 kHz (±0.5 dB)
PHONO ..... 20 Hz to 20 kHz (±1.5 dB/RIAA)
MIC ..... 20 Hz to 20 kHz (±2 dB)

SN ratio
CD/LINE ..... 85 dB
PHONO ..... 77 dB
MIC ..... 69 dB

Total harmonic distortion rate
CD/LINE ,PHONO ,MIC ..... Below 0.02 %

Cross talk ..... 70 dB

Channel equalizer
LOW ..... +12 dB, –20 dB (100 Hz)
MID ..... +12 dB, –20 dB (1 kHz)
HI ..... +12 dB, –20 dB (10 kHz)

Microphone equalizer
LOW ..... ±12 dB (100 Hz)
MID ..... ±12 dB (1 kHz)
HI ..... ±12 dB (10 kHz)

Monitor equalizer ..... ±12 dB (100 Hz)

Effector
Delay, echo ..... 0 to 680 mSec
Auto pan ..... 0 to 3500 mSec
Flanger ..... 100 to 9000 mSec
Reverb ..... 0 to 100 %
Pitch shifter ..... 0 to ±100 %

Electrical Section, Others

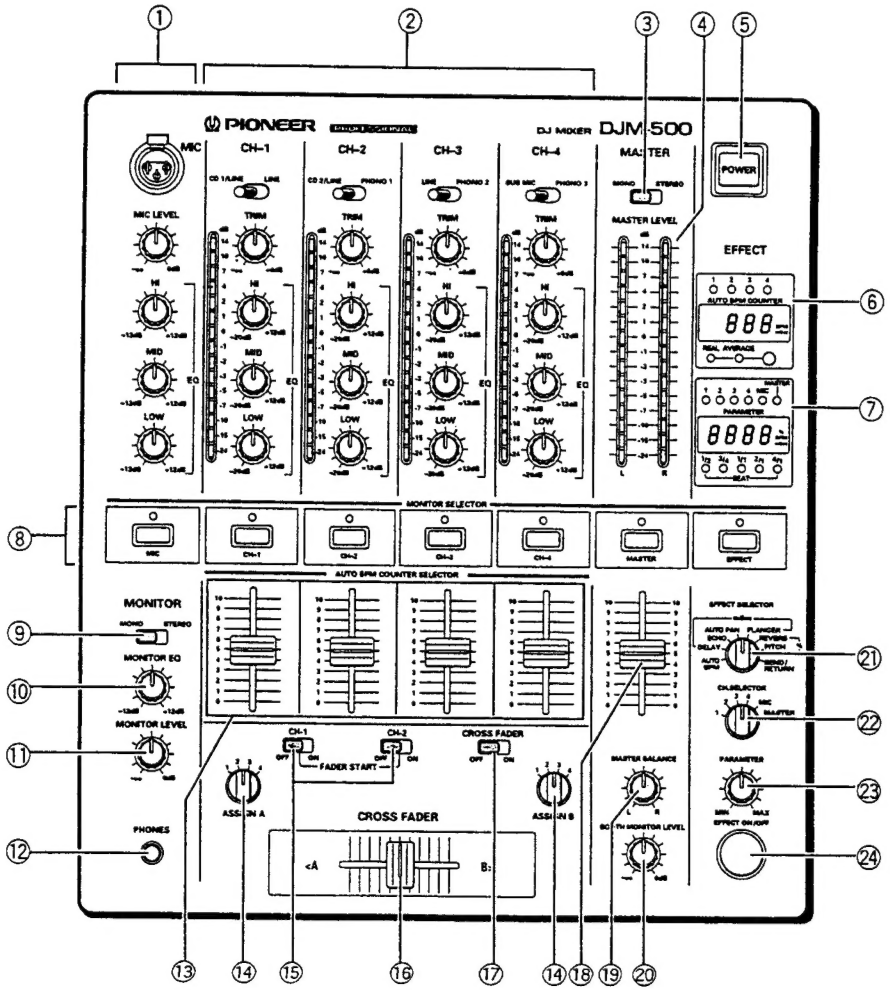
Power supply voltage .....
Power consumption ..... 41 W
Operating temperature ..... +5 °C to +35 °C
Operating humidity ..... 5 % to 85 %
External dimensions ..... 320 (W) × 357.4 (D) × 107 (H) mm
12-5/8 (W) × 14-1/16 (D) × 4-3/16 (H) in
Weight ..... 5.9 kg (13 lb)

Accessories

- Power cord 1
- Operating instructions 1

NOTE:
Specifications and the design are subject to possible modifications without notice, due to improvements.

Front section



① Main Microphone Terminal and Microphone Control Knob

MIC Level:
Used for adjusting the volume of the main microphone. (Attenuated level −∞ to 0 dB)

HI:
Used for adjusting the high tone of the microphone sound.
Flat at center click.
Increases when rotated to the right. (To +12 dB at 10 kHz)
Decreases when rotated to the left. (To −12 dB at 10 kHz)

MID:
Used for adjusting the middle tone of the microphone sound.
Flat at center click.
Increases when rotated to the right. (To +12 dB at 1 kHz)
Decreases when rotated to the left. (To −12 dB at 1 kHz)

LOW:
Used for adjusting the low tone of the microphone sound.
Flat at center click.
Increases when rotated to the right. (To +12 dB at 100 Hz)
Decreases when rotated to the left. (To −12 dB at 100 Hz)

② CH1 to CH4 Input Selection Switch and Control Knob/Peak level meter

Input selection switch:
Selects which sound of the two units connected to each CH to use.
CH1 : Switches between CD1/LINE and LINE
CH2 : Switches between CD2/LINE and PHONO 1
CH3 : Switches between LINE and PHONO 2
CH4 : Switches between SUB MIC and PHONO 3

TRIM:
Used for adjusting the level of the input signal.
The level increases when rotated to the right. (To +6 dB)
The level decreases when rotated to the left. (To −∞)

HI:
Used for adjusting the high tone.
Flat at center click.
Increases when rotated to the right. (To +12 dB at 10 kHz)
Decreases when rotated to the left. (To −20 dB at 10 kHz)

MID:
Used for adjusting the middle tone.
Flat at center click.
Increases when rotated to the right. (To +12 dB at 1 kHz)
Decreases when rotated to the left. (To −20 dB at 1 kHz)

LOW:
Used for adjusting the low tone.
Flat at center click.
Increases when rotated to the right. (To +12 dB at 100 Hz)
Decreases when rotated to the left. (To −20 dB at 100 Hz)

Peak level meter:
Displays the peak level holding it for two seconds.
Displays the level before channel fader.
The display range is −24 dB to +14 dB.
When BPM is selected using the effect selector and the effect switch is turned on, the beat monitor function will be turned on.

③ Master Output Monaural/Stereo Selection Switch (MONO/STEREO)

④ Master level meter (MASTER LEVEL)

Displays the output level after master volume adjusment while holding it for 2 seconds.
The display range is −24 dB to +14 dB.

⑤ Power Supply Switch (POWER)

⑥ BPM Display

- When BPM is selected using the effect selector, the BPM of the source selected with the monitor selector (CH1 to CH4) will be displayed.

1 to 4:
Displays the channel measuring the BPM.

Counter:
Displays the BPM value.

Real-time/average selection button and indicator:
(When REAL is selected.)
The counter displays the measured BPM value.
It will be displayed blinking. If it could not be measured for more than 5 seconds, "– – –" is displayed.
(When AVERAGE is selected.)
The display changes when it could be measured.
While measuring, the previous value will remain displayed.

- When other than BPM is selected using the effect selector (DELAY, ECHO, AUTO PAN, FLANGER), the source BPM selected using the effect channel selector (㉒) is converted to hours and displayed on the counter.

⑦ Effector Parameter/BPM Display

1 to 4 MIC MASTER:
Displays the effect source.

Counter:
Displays the effect source BPM and effect parameter, etc. (Refer to ㉓ for details of the parameter.)
BPM...375 to 857 mSec (1 mSec step)
70.0 to 160.0 BPM (0.1 BPM step)

BEAT:
When the effect is set to delay, echo, auto pan, or flanger, displays to which beat the parameter is set. (1/2 to 4 beats)

⑧ Monitor Selector/Auto BPM Counter Selector button (MONITOR SELECTOR/AUTO BPM COUNTER SELECTOR)

- Selects the source which is monitored using the headphone (CH1 to 4, MIC, MASTER, EFFECT).
When several buttons are pressed, sounds can be mixed.
When the button is pressed another time, the selection is canceled.
- When BPM is selected using the effect selector, the channel displaying the BPM (CH1 to CH4) is selected.
When more than two are selected together, BPM will not be displayed properly.